THE MAGAZINE OF

Fantasy AND Science Fiction

Open to Me
My Sister

PHILIP JOS
FARMER

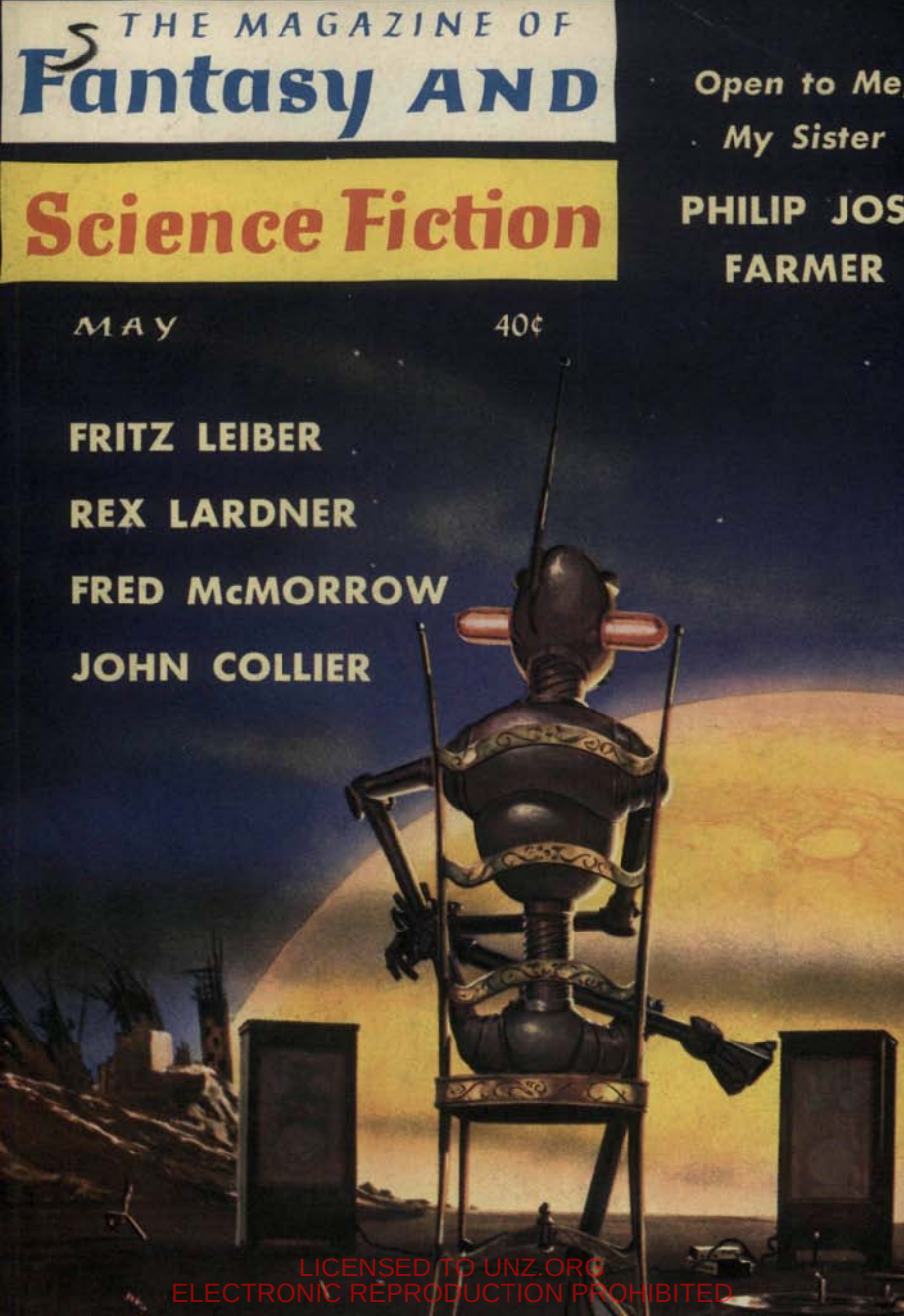
MAY 40¢

FRITZ LEIBER

REX LARDNER

FRED McMORROW

JOHN COLLIER



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Fantasy and Science Fiction

MAY *Including Venture Science Fiction*

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Cover by Mel Hunter
(*"Music to Watch the Moon Rise By"*)

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In this issue . . .

Philip José Farmer's novelet on page 85 reminds us of a question we've been meaning to ask. As we have said before, our editorial policy is based on the belief that science fiction is an infinitely various field, and that we urgently favor the maximum exploitation of that variety. To which end we have published many controversial stories, including in the last year such fiction as Robert A. Heinlein's "Starship Soldier" and Mr. Farmer's "The Alley Man." Both drew letters of protest and praise —the Heinlein on ideological grounds, and the Farmer largely on artistic grounds—and to our mind, thereby justified their publication. Not that we feel our sole mission is to make man think—ideally, every issue contains a balance of presently delightful but possibly forgettable entertainment, and fresh, stimulating ideas which, in one form or another, may stick with you. (That's an oversimplified statement, of course, which is offered primarily for the purposes of this discussion.) To achieve this sort of balance, we have published a fair amount of material which by no means expressed the opinions of the editorial management . . . and we intend to go on doing so, unless our readers tell us in enough numbers that they do not approve of controversial variety in this speculative, imaginative field . . . Will you drop us an opinion?

As an example, in a highly modest way, of the variety possible to us, this issue is largely made up of pairs of stories—pairs which share a common setting, or point, or subject, but which are nonetheless quite different from each other. (Curiously enough, this effect was not planned in advance.)

Coming soon . . .

"The Golden Bugs" (novelet), by Clifford D. Simak . . . "Things," by Zenna Henderson . . . "The Burning," by Theodore R. Cogswell . . . "Cato the Martian," by Howard Fast . . . "Callahan and the Wheelies," by Stephen Barr . . . "Who Dreams of Ivy," by Will Worthington . . . "The Man on Top," by R. Bretnor . . . "Interbalance," by Katherine MacLean . . . "NRACP," by George P. Elliott . . . "Beyond Ganga Mata," by John Berry . . . and much more.

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Max told us he had seen the rockets' red glare at Fort McHenry . . . that he would be with the South Martians when the time came for them to storm Copernicus in the Second Colonial War . . . that he would be in a foxhole outside Copeybawa a billion years from now. . . . "Thank God," I said to myself, "for all screwballs."

THE OLDEST SOLDIER

by Fritz Leiber

THE ONE WE CALLED THE Leutnant took a long swallow of his dark Loewensbrau. He'd just been describing a battle of infantry rockets on the Eastern Front, the German and Russian positions erupting bundles of flame.

Max swished his paler beer in its green bottle and his eyes got a faraway look and he said, "When the rockets killed their thousands in Copenhagen, they laced the sky with fire and lit up the steeples in the city and the masts and bare spars of the British ships like a field of crosses."

"I didn't know there were any landings in Denmark," someone remarked with an expectant casualness.

"This was in the Napoleonic wars," Max explained. "The British bombarded the city and captured the Danish fleet. Back in 1807."

"Vas you dere, Maxie?" Woody asked, and the gang around the counter chuckled and beamed. Drinking at a liquor store is a pretty dull occupation and one is grateful for small vaudeville acts.

"Why bare spars?" someone asked.

"So there'd be less chance of the rockets setting the launching ships afire," Max came back at him. "Sails burn fast and wooden ships are tinder anyway—that's why ships firing red-hot shot never worked out. Rockets and bare spars were bad enough. Yes, and it was Congreve rockets made the 'red glare' at Fort McHenry," he continued unruffled, "while the 'bombs bursting in air' were about the earliest precision artillery shells, fired from mortars on bomb-ketches. There's a condensed history of arms in the American anthem." He looked around smiling.

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"Yes, I was there, Woody — just as I was with the South Martians when they stormed Copernicus in the Second Colonial War. And just as I'll be in a foxhole outside-Copeybawa a billion years from now while the blast waves from the battling Venusian spaceships shake the soil and roil the mud and give me some more digging to do."

This time the gang really snorted its happy laughter and Woody was slowly shaking his head and repeating, "Copenhagen and Copernicus and—what was the third? Oh, what a mind he's got," and the Leutnant was saying, "Yah, you vas there—in books," and I was thinking, *Thank God for all screwballs, especially the brave ones who never flinch, who never lose their tempers or drop the act, so that you never do quite find out whether it's just a gag or their solemnest belief. There's only one person here takes Max even one percent seriously, but they all love him because he won't ever drop his guard...*

"The only point I was trying to make," Max continued when he could easily make himself heard "was the way styles in weapons keep moving in cycles."

"Did the Romans use rockets?" asked the same light voice as had remarked about the landings in Denmark and the bare spars. I saw now it was Sol from behind the counter.

Max shook his head. "Not so you'd notice. Catapults were their specialty." He squinted his eyes. "Though now you mention it, I recall a dogfoot telling me Archimedes faked up some rockets powered with Greek fire to touch off the sails of the Roman ships at Syracuse—and none of this romance about a giant burning glass."

"You mean," said Woody, "that there are other gazebos besides yourself in this fighting-all-over-the-universe-and-to-the-end-of-time racket?" His deep whiskey voice was at its solemnest and most wondering.

"Naturally," Max told him earnestly. "How else do you suppose wars ever get really fought and refought?"

"Why should wars ever be refought?" Sol asked lightly. "Once ought to be enough."

"Do you suppose anybody could time-travel and keep his hands off wars? Max countered.

I put in my two cents' worth. "Then that would make Archimedes' rockets the earliest liquid-fuel rockets by a long shot."

Max looked straight at me, a special quirk in his smile. "Yes, I guess so," he said after a couple of seconds. "On this planet, that is."

The laughter had been falling off, but that brought it back and while Woody was saying loudly to himself, "I like that refighting part —that's what we're all so good at," the Leutnant asked Max with only

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a moderate accent that fit North Chicago, "And zo you aggshually have fought on Mars?"

"Yes, I have," Max agreed after a bit. "Though that ruckus I mentioned happened on our moon—expeditionary forces from the Red Planet."

"Ach, yes. And now let me ask you something—"

I really mean that about screwballs, you know. I don't care whether they're saucer addicts or extrasensory perception bugs or religious or musical maniacs or crackpot philosophers or psychologists or merely guys with a strange dream or gag like Max—for my money they are the ones who are keeping individuality alive in this age of conformity. They are the ones who are resisting the encroachments of the mass media and motivation research and the mass man. The only really bad thing about crack pottery and screwballistics (as with dope and prostitution) is the coldblooded people who prey on it for money. So I say to all screwballs: Go it on your own. Don't take any wooden nickels or give out any silver dimes. Be wise and brave—like Max.

He and the Leutnant were working up a discussion of the problems of artillery in airless space and low gravity that was a little too technical to keep the laughter alive. So Woody up and remarked, "Say, Maximilian, if you got to be in all these wars all over hell and gone, you must have a pretty tight schedule. How come you got time to be drinking with us bums?"

"I often ask myself that," Max cracked back at him. "Fact is, I'm on a sort of unscheduled furlough, result of a transportation slip-up. I'm due to be picked up and returned to my outfit any day now—that is, if the enemy underground doesn't get to me first."

It was just then, as Max said that bit about enemy underground, and as the laughter came, a little diminished, and as Woody was chortling "Enemy underground now. How do you like that?" and as I was thinking how much Max had given me in these couple of weeks—a guy with an almost poetic flare for vivid historical reconstruction, but with more than that . . . it was just then that I saw the two red eyes low down in the dusty plate-glass window looking in from the dark street.

Everything in modern America has to have a big plate glass display window, everything from suburban mansions, general managers' offices and skyscraper apartments to barber shops and beauty parlors and ginmills—there are even gymnasium swimming pools with plate glass windows twenty feet high opening on busy boulevards—and Sol's dingy liquor store was no exception;

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in fact I believe there's a law that it's got to be that way. But I was the only one of the gang who happened to be looking out of this particular window at the moment. It was a dark windy night outside and it's a dark and untidy street at best and across from Sol's are more plate glass windows that sometimes give off very odd reflections, so when I got a glimpse of this black formless head with the two eyes like red coals peering in past the brown pyramid of empty whiskey bottles, I don't suppose it was a half second before I realized it must be something like a couple of cigarette butts kept alive by the wind, or more likely a freak reflection of tail lights from some car turning a corner down the street, and in another half second it was gone, the car having finished turning the corner or the wind blowing the cigarette butts away altogether. Still, for a moment it gave me a very goosey feeling, coming right on top of that remark about an enemy underground.

And I must have shown my reaction in some way, for Woody, who is very observant, called out, "Hey, Fred, has that soda pop you drink started to rot your nerves—or are even Max's friends getting sick at the outrageous lies he's been telling us?"

Max looked at me sharply and perhaps he saw something too. At any rate he finished his beer and said, "I guess I'll be taking off." He didn't say it to me particularly, but he kept looking at me. I nodded and put down on the counter my small green bottle, still one-third full of the lemon pop I find overly sweet, though it was the sourest Sol stocked. Max and I zipped up our wind-breakers. He opened the door and a little of the wind came in and troubled the tanbark around the sill. The Leutnant said to Max, "Tomorrow night we design a better space gun"; Sol routinely advised the two of us, "Keep your noses clean"; and Woody called, "So long space soldiers." (And I could imagine him saying as the door closed, "That Max is nuttier than a fruitcake and Freddy isn't much better. Drinking soda pop—ugh!")

And then Max and I were outside leaning into the wind, our eyes slitted against the blown dust, for the three-block trudge to Max's pad—a name his tiny apartment merits without any attempt to force the language.

There weren't any large black shaggy dogs with red eyes slinking about and I hadn't quite expected there would be.

Why Max and his soldier-of-history gag and our outwardly small comradship meant so much to me is something that goes way back into my childhood. I was a lonely timid child, with no brothers and sisters to spar around with in preparation for the battles of

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life, and I never went through the usual stages of boyhood gangs either. In line with those things I grew up into a very devout liberal and "hated war" with a mystical fervor during the intermission between 1918 and 1939—so much so that I made a point of avoiding military services in the second conflict, though merely by working in the nearest war plant, not by the arduously heroic route of out-and-out pacifism.

But then the inevitable reaction set in, sparked by the liberal curse of being able, however, belatedly, to see both sides of any question. I began to be curious about and cautiously admiring of soldiering and soldiers. Unwillingly at first, I came to see the necessity and romance of the spearmen —those guardians, often lonely as myself, of the perilous camps of civilization and brotherhood in a black hostile universe . . . necessary guardians, for all the truth in the indictments that war caters to irrationality and sadism and serves the munition makers and reaction.

I commenced to see my own hatred of war as in part only a mask for cowardice, and I started to look for some way to do honor in my life to the other half of the truth. Though it's anything but easy to give yourself a feeling of being brave just because you suddenly want that feeling. Obvious opportunities to be obviously brave come very seldom in our largely civilized culture, in fact they're clean contrary to safety drives and so-called normal adjustment and good peacetime citizenship and all the rest, and they come mostly in the earliest part of a man's life. So that for the person who belatedly wants to be brave it's generally a matter of waiting for an opportunity for six months and then getting a tiny one and muffing it in six seconds.

But however uncomfortable it was, I had this reaction to my devout early pacifism, as I say. At first I took it out only in reading. I devoured war books, current and historical, fact and fiction. I tried to soak up the military aspects and jargon of all ages, the organization and weapons, the strategy and tactics. Characters like Tros of Samothrace and Horatio Hornblower became my new secret heroes, along with Heinlein's space cadets and Bullard and other brave rangers of the spaceways.

But after a while reading wasn't enough. I had to have some real soldiers and I finally found them in the little gang that gathered nightly at Sol's liquor store. It's funny, but liquor stores that serve drinks have a clientele with more character and comradship than the clienteles of most bars—perhaps it is the absence of juke-boxes, chromium plate, bowling machines, trouble-hunting, drink-cadging women, and—along with

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those—men in search of fights and forgetfulness. At any rate, it was at Sol's liquor store that I found Woody and the Leutnant and Bert and Mike and Pierre and Sol himself. The casual customer would hardly have guessed that they were anything but quiet souses, certainly not soldiers, but I got a clue or two and I started to hang around, making myself inconspicuous and drinking my rather symbolic soda pop, and pretty soon they started to open up and yarn about North Africa and Stalingrad and Anzio and Korea and such and I was pretty happy in a partial sort of way.

And then about a month ago Max had turned up and he was the man I'd really been looking for. A genuine soldier with my historical slant on things—only he knew a lot more than I did, I was a rank amateur by comparison—and he had this crazy appealing gag too, and besides that he actually cottoned to me and invited me on to his place a few times, so that with him I was more than a tavern hanger-on. Max was good for me, though I still hadn't the faintest idea of who he really was or what he did.

Naturally Max hadn't opened up the first couple of nights with the gang, he'd just bought his beer and kept quiet and felt his way much as I had. Yet he looked and felt so much the soldier that I think the gang was inclined to accept him from the start—a quick stocky man with big hands and a leathery face and smiling tired eyes that seemed to have seen everything at one time or another. And then on the third or fourth night Bert told something about the Battle of the Bulge and Max chimed in with some things he'd seen there, and I could tell from the looks Bert and the Leutnant exchanged that Max had "passed"—he was now the accepted seventh member of the gang, with me still as the tolerated clerical-type hanger-on, for I'd never made any secret of my complete lack of military experience.

Not long afterwards—it could have been more than one or two nights—Woody told some tall tales and Max started matching him and that was the beginning of the time-and-space-soldier gag. It was funny about the gag. I suppose we just should have assumed that Max was a history nut and liked to parade his bookish hobby in a picturesque way—and maybe some of the gang did assume just that—but he was so vivid yet so casual in his descriptions of other times and places that you felt there had to be something more and sometimes he'd get such a lost, nostalgic look on his face talking of things fifty million miles or five hundred years away that Woody would almost die laughing, which was really the sincerest sort of tribute to Max's convincingness.

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Max even kept up the gag when he and I were alone together, walking or at his place—he'd never come to mine—though he kept it up in a minor-key sort of way, so that it sometimes seemed that what he was trying to get across was not that he was the Soldier of a Power that was fighting across all of time to change history, but simply that we men were creatures with imaginations and it was our highest duty to try to feel what it was really like to live in other times and places and bodies. Once he said to me, "The growth of consciousness is everything, Fred—the seed of awareness sending its roots across space and time. But it can grow in so many ways, spinning its webs from mind to mind like the spider or burrowing into the unconscious darkness like the snake. The biggest wars are the wars of thought."

But whatever he was trying to get across, I went along with his gag—which seems to me the proper way to behave with any other man, screwball or not, so long as you can do it without violating your own personality. Another man brings a little life and excitement into the world, why try to kill it? It is simply a matter of politeness and style.

I'd come to think a lot about style since knowing Max. It doesn't matter so much what you do in life, he once said to me—soldiering or clerking, preaching or picking pockets—so long as you do it with style. Better fail in a grand style than succeed in a mean one—you won't enjoy the successes you get the second way.

Max seemed to understand my own special problems without my having to confess them. He pointed out to me that the soldier is trained for bravery. The whole object of military discipline is to make sure that when the six seconds of testing come every six months or so, you do the brave thing without thinking, by drilled second nature. It's not a matter of of the soldier having some special virtue or virility the civilian lacks. And then about fear. All men are afraid, Max said, except a few psychopathic or suicidal types and they merely haven't fear at the conscious level. But the better you know yourself and the men around you and the situation you're up against (though you can never know all of the last and sometimes you have only a glimmering), then the better you are prepared to prevent fear from mastering you. Generally speaking, if you prepare yourself by the daily self-discipline of looking squarely at life, if you imagine realistically the troubles and opportunities that may come, then the chances are you won't fail in the testing. Well, of course I'd heard and read all those things before, but coming from Max they seemed to mean a lot more to me. As I say, Max was good for me.

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So on this night when Max had talked about Copenhagen and Copernicus and Copeybawa and I'd imagined I'd seen a big black dog with red eyes and we were walking the lonely streets hunched in our jackets and I was listening to the big clock over at the University tolling eleven . . . . well, on this night I wasn't thinking anything special except that I was with my screwball buddy and pretty soon we'd be at his place and having a nightcap. I'd make mine coffee.

I certainly wasn't expecting anything.

Until, at the windy corner just before his place, Max suddenly stopped.

Max's junky front room-and-a-half was in a smoky brick building two flights up over some run-down stores. There is a rust-flaked fire escape on the front of it, running past the old-fashioned jutting bay windows, its lowest flight a counterbalanced one that only swings down when somebody walks out onto it—that is, if a person ever had occasion to.

When Max stopped suddenly, I stopped too of course. He was looking up at his window. His window was dark and I couldn't see anything in particular, except that he or somebody else had apparently left a big black bundle of something out on the fire-escape and—and it wouldn't be the first time I'd seen that space used for storage and drying wash and what not, against all fire regulations, I'm sure.

But Max stayed stopped and kept on looking.

"Say, Fred," he said softly then, "how about going over to your place for a change? Is the standing invitation still out?"

"Sure Max, why not," I replied instantly, matching my voice to his. "I've been asking you all along."

My place was just two blocks away. We'd only have to turn the corner we were standing on and we'd be headed straight for it.

"Okay then," Max said. "Let's get going." There was a touch of sharp impatience in his voice that I'd never heard there before. He suddenly seemed very eager that we should get around that corner. He took hold of my arm.

He was no longer looking up at the fire escape, but I was. The wind had abruptly died and it was very still. As we went around the corner—to be exact as Max pulled me around it—the big bundle of something lifted up and looked down at me with eyes like two red coals.

I didn't let out a gasp or say anything, I don't think Max realized then that I'd seen anything, but I was shaken. This time I couldn't lay it to cigarette butts or reflected tail lights, they were too difficult to place on a third-story

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fire escape. This time my mind would have to rationalize a lot more inventively to find an explanation, and until it did I would have to believe that something . . . well, alien . . . was at large in this part of Chicago.

Big cities have their natural menaces—hold-up artists, hopped-up kids, sick-headed sadists, that sort of thing—and you're more or less prepared for them. You're not prepared for something . . . alien. If you hear a scuttling in the basement you assume it's rats and although you know rats can be dangerous you're not particularly frightened and you may even go down to investigate. You don't expect to find bird-catching Amazonian spiders.

The wind hadn't resumed yet. We'd gone about a third of the way down the first block when I heard behind us, faintly but distinctly, a rusty creaking ending in a metallic jar that didn't fit anything but the first flight of the fire escape swinging down to the sidewalk.

I just kept walking then, but my mind split in two—half of it listening and straining back over my shoulder, the other half darting off to investigate the weirdest notions, such as that Max was a refugee from some unimaginable concentration camp on the other side of the stars. If there were such concentration camps, I told myself in my cold hysteria, run by some sort of supernatural SS men, they'd have dogs just like the one I'd thought I'd seen . . . and, to be honest, thought I'd *see* padding along if I looked over my shoulder now.

It was hard to hang on and just walk, not run, with this insanity or whatever it was hovering over my mind, and the fact that Max didn't say a word didn't help either.

Finally, as we were starting the second block, I got hold of myself and I quietly reported to Max exactly what I thought I'd seen. His response surprised me.

"What's the layout of your apartment, Fred? Third floor, isn't it?

"Yes. Well . . ."

"Begin at the door we'll be going in," he directed me.

"That's the living room, then there's a tiny short open hall, then the kitchen. It's like an hour glass, with the living room and kitchen the ends, and the hall the wasp waist. Two doors open from the hall: the one to your right (figuring from the living room) opens into the bathroom; the one to your left, into a small bedroom."

"Windows?"

"Two in the living room, side by side," I told him. "None in the bathroom. One in the bedroom, onto an air shaft. Two in the kitchen, apart."

"Back door in the kitchen?" he asked.

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"Yes. To the back porch. Has glass in the top half of it. I hadn't thought about that. That makes three windows in the kitchen."

"Are the shades in the windows pulled down now?"

"No."

Questions and answers had been rapid-fire, without time for me to think, done while we walked a quarter of a block. Now after the briefest pause Max said, "Look, Fred, I'm not asking you or anyone to believe in all the things I've been telling as if for kicks at Sol's —that's too much for all of a sudden—but you do believe in that black dog, don't you?" He touched my arm warningly. "No, don't look behind you!"

I swallowed. "I believe in him right now," I said.

"Okay. Keep on walking. I'm sorry I got you into this, Fred, but now I've got to try to get both of us out. *Your* best chance is to disregard the thing, pretend you're not aware of anything strange happened—then the beast won't know whether I've told you anything, it'll be hesitant to disturb you, it'll try to get at me without troubling you, and it'll even hold off a while if it thinks it will get me that way. But it won't hold off forever—it's only imperfectly disciplined. *My* best chance is to get in touch with headquarters—something I've been putting off—and have them pull me out. I should be able to do it in an hour, maybe less. You can give me that time, Fred."

"How?" I asked him. I was mounting the steps to the vestibule. I thought I could hear, very faintly, a light pad-padding behind us. I didn't look back.

Max stepped through the door I held open and we started up the stairs.

"As soon as we get in your apartment," he said, "you turn on all the lights in the living room and kitchen. Leave the shades up. Then start doing whatever you might be doing if you were staying up at this time of night. Reading or typing, say. Or having a bite of food, if you can manage it. Play it as naturally as you can. If you hear things, if you feel things, try to take no notice. Above all, don't open the windows or doors, or look out of them to see anything, or go to them if you can help it—you'll probably feel drawn to do just that. Just play it naturally. If you can hold them . . . it . . . off that way for half an hour or so—until midnight, say—if you can give me that much time, I should be able to handle my end of it. And remember, it's the best chance for you as well as for me. Once I'm out of here, you're safe."

"But you—" I said, digging for my key, "—what will you—?"

"As soon as we get inside," Max said, "I'll duck in your bedroom and shut the door. Pay no attention. Don't come after me,

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whatever you hear. Is there a plug-in in your bedroom? I'll need juice.

"Yes," I told him, turning the key. "But the lights have been going off a lot lately. Someone has been blowing the fuses."

"That's great," he growled, following me inside.

I turned on the lights and went in the kitchen, did the same there and came back. Max was still in the living room, bent over the table beside my typewriter. He had a sheet of light-green paper. He must have brought it with him. He was scrawling something at the top and bottom of it. He straightened up and gave it to me.

"Fold it up and put it in your pocket and keep it on you the next few days," he said.

It was just a blank sheet of cracklingly thin light-green paper with "Dear Fred" scribbled at the top and "Your friend, Max Bournemann" at the bottom and nothing in between.

"But what—?" I began, looking up at him.

"Do as I say! " He snapped at me. Then, as I almost flinched away from him, he grinned—a great big comradely grin.

"Okay, let's get working," he said, and he went into the bedroom and shut the door behind him.

I folded the sheet of paper three times and unzipped my wind-breaker and tucked it inside the breast pocket. Then I went to the bookcase and pulled at random a volume out of the top shelf —my psychology shelf, I remembered the next moment—and sat down and opened the book and looked at a page without seeing the print.

And now there was time for me to think. Since I'd spoken of the red eyes to Max there had been no time for anything but to listen and to remember and to act. Now there was time for me to think. Since I'd spoken of the red eyes to Max, there had been no time for anything but to listen and to remember and to act. Now there was time to think.

My first thoughts were: *This is ridiculous! I saw something strange and frightening, sure, but it was in the dark, I couldn't see anything clearly, there must be some simple natural explanation for whatever it was on the fire escape. I saw something strange and Max sensed I was frightened and when I told him about it he decided to play a practical joke on me in line with that eternal gag he lives by. I'll bet right now he's lying on my bed and chuckling, wondering how long it'll be before I—*

The window beside me rattled as if the wind had suddenly risen again. The rattling grew more violent—and then it abruptly stopped without dying away,

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stopped with a feeling of tension, as if the wind or something more material were still pressing against the pane.

And I did not turn my head to look at it, although (or perhaps because) I knew there was no fire escape or other support outside. I simply endured that sense of a presence at my elbow and stared unseeingly at the book in my hands, while my heart pounded and my skin froze and flushed.

I realized fully then that my first skeptical thoughts had been the sheerest automatic escapism and that, just as I'd told Max, I believed with my whole mind in the black dog. I believed in the whole business insofar as I could imagine it. I believed that there are undreamed of powers warring in this universe. I believed that Max was a stranded time-traveller and that in my bedroom he was now frantically operating some unearthly device to signal for help from some unknown headquarters. I believed that the impossible and the deadly was loose in Chicago.

But my thoughts couldn't carry further than that. They kept repeating themselves, faster and faster. My mind felt like an engine that is shaking itself to pieces. And the impulse to turn my head and look out the window came to me and grew.

I forced myself to focus on the middle of the page where I had the book open and start reading.

Jung's archetype transgress the barriers of time and space. More than that: they are capable of breaking the shackles of the laws of causality. They are endowed with frankly mystical "prospective" faculties. The soul itself, according to Jung, is the reaction of the personality to the unconscious and includes in every person both male and female elements, the animus and anima, as well as the persona or the person's reaction to the outside world...

I think I read that last sentence a dozen times, swiftly at first, then word by word, until it was a meaningless jumble and I could no longer force my gaze across it.

The glass in the window beside me creaked.

I laid down the book and stood up, eyes front, and went into the kitchen and grabbed a handful of crackers and opened the refrigerator.

The rattling that muted itself in hungry pressure followed. I heard it first in one kitchen window, then the other, then in the glass in the top of the door. I didn't look.

I went back in the living room, hesitated a moment beside my typewriter, which had a blank sheet of yellow paper in it, then sat down again in the armchair beside the window, putting the crackers and the half carton of

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milk on the little table beside me. I picked up the book I'd tried to read and put it on my knees.

The rattling returned with me —at once and peremptorily, as if something were growing impatient.

I couldn't focus on the print any more. I picked up a cracker and put it down. I touched the cold milk carton and my throat constricted and I drew my fingers away.

I looked at my typewriter and then I thought of the blank sheet of *green* paper and the explanation for Max's strange act suddenly seemed clear to me. Whatever happened to him tonight, he wanted me to be able to type a message over his signature that would exonerate me. A suicide note, say. Whatever happened to him . . .

The window beside me shook violently, as if at a terrific gust.

I occurred to me that while I must not look out out of the window as if expecting to see something (that would be the sort of give-away against which Max warned me) I could safely let my gaze slide across it—say, if I turned to look at the clock behind me. Only, I told myself, I mustn't pause or react if I saw anything.

I nerved myself. After all, I told myself, there was the blessed possibility that I would see nothing outside the taut pane but darkness.

I turned my head to look at the clock.

I saw *it* twice, going and coming back, and although my gaze did not pause or falter, my blood and my thoughts started to pound as if my heart and mind would burst.

It was about two feet outside the window—a face or mask or muzzle of a more gleaming black than the darkness around it. The face was at the same time the face of a hound, a panther, a giant bat, and a man — in between those four. A pitiless, hopeless man-animal face alive with knowledge but dead with a monstrous melancholy and a monstrous malice. There was the sheen of needlelike white teeth against black lips or dewlaps. There was the dull pulsing glow of eyes like red coals.

My gaze didn't pause or falter or go back—yes—and my heart and mind didn't burst, but I stood up then and stepped jerkily to the typewriter and sat down at it and started to pound the keys. After a while my gaze stopped blurring and I started to see what I was typing. The first thing I'd typed was:

the quick red fox jumped over the crazy black dog. . .

I kept on typing. It was better than reading. Typing I was doing something, I could discharge. I typed a flood of fragments:

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"Now is the time for all good men—", the first words of the Declaration of Independence and the Constitution, the Winston Commercial, six lines of Hamlet's "To be or not to be" without punctuation, Newton's Third Law of Motion, "Mary had a big black—"

In the middle of it all the face of the electric clock that I'd looked at sprang into my mind. My mental image of it had been blanked out until then. The hands were at quarter to twelve.

Whipping in a fresh yellow sheet, I typed the first stanza of Poe's "Raven," the Oath of Allegiance to the American Flag, the lost-ghost lines from Thomas Wolfe, the Creed and the Lord's prayer, "Beauty is truth; truth, blackness—"

The rattling made a swift circuit of the windows—though I heard nothing from the bedroom, nothing at all—and finally the rattling settled on the kitchen door. There was a creaking of wood and metal under pressure.

I thought: *You are standing guard. You are standing guard for yourself and for Max.* And then the second thought came: *If you open the door, if you welcome it in, if you open the kitchen door and then the bedroom door, it will spare you, it will not hurt you.*

Over and over again I fought down that second thought and the urge that went with it. It didn't seem to be coming from my mind, but from the outside. I typed Ford, Buick, the names of all the automobiles I could remember, Overland, Moon, I typed all the four-letter words, I typed the alphabet, lower case and capitals, I typed the numerals and punctuation marks, I typed the keys of the keyboard in order from left to right, top to bottom, then in from each side alternately. I filled the last yellow sheet I was on and it fell out and I kept pounding mechanically, making shiny black marks on the dull black platen.

But then the urge became something I could not resist. I stood up and in the sudden silence I walked through the hall to the back door, looking down at the floor and resisting, dragging each step as much as I could.

My hands touched the knob and the long-handled key in the lock. My body pressed the door, which seemed to surge against me, so that I felt it was only my counter-pressure that kept it from bursting open in a shower of splintered glass and wood.

Far off, as if it were something happening in another universe, I heard the University clock tolling One . . . two . . .

And then, because I could resist no longer, I turned the key and the knob.

The lights all went out.

In the darkness the door pushed open against me and something came in past me like a gust of cold

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black wind with streaks of heat in it.

I heard the bedroom door swing open.

The clock completed its strokes. Eleven . . . twelve . . .

And then . . .

Nothing . . . nothing at all. All pressures lifted from me. I was aware only of being alone, utterly alone. I knew it, deep down.

After some . . . minutes, I think, I shut and locked the door and I went over and opened a drawer and rummaged out a candle, lit it, and went through the apartment and into the bedroom.

Max wasn't there. I'd known he wouldn't be. I didn't know how badly I'd failed him. I lay down on the bed and after a while I began to sob and, after another while, I slept.

Next day I told the janitor about the lights. He gave me a funny look.

"I know," he said. "I just put in a new fuse this morning. I never saw one blown like that before. The window in the fuse was gone and there was a metal sprayed all over the inside of the box."

That afternoon I got Max's message. I'd gone for a walk in the park and was sitting on a bench beside the lagoon, watching the water ripple in the breeze when I felt something burning against my chest. For a moment I thought I'd dropped my cigarette butt inside my windbreaker. I reached in and touched something hot in my pocket and jerked it out. It was the sheet of green paper Max had given me. Tiny threads of smoke were rising from it.

I flipped it open and read, in a scrawl that smoked and grew blacker instant by instant:

Thought you'd like to know I got through okay. Just in time. I'm back with my outfit. It's not too bad. Thanks for the rear-guard action.

The handwriting (thought-writing?) of the blackening scrawl was identical with the salutation above and the signature below.

And then the sheet burst into flame. I flipped it away from me. Two boys launching a model sailboat looked at me strangely I looked at the paper flaming, blackening, whitening, disintegrating . . .

I know enough chemistry to know that paper smeared with wet white phosphorus will burst into flame when it dries completely. And I know there are kinds of invisible writing that are brought out by heat. There are those general sorts of possibility. Chemical writing.

And then there's thoughtwriting, which is nothing but a word I've coined. Writing from a distance—a literal telegram.

And there may be a combina-

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tion of the two—chemical writing activated by thought from a distance . . . from a great distance.

I don't know. I simply don't know. When I remember that last night with Max, there are parts of it I doubt. But there's one part I never doubt.

When the gang asks me, "Where's Max?" I just shrug.

But when they get to talking about withdrawals they've covered; rearguard actions they've been in, I remember mine. I've never told them about it, but I never doubt that it took place.

Through Time And Space With Ferdinand Feghoot: XXVI

FERDINAND FEGHOOT PLACED HIMSELF in great peril when he explored the dry-jungle valleys of Golightly III, and discovered the *dzop,* the strange flying bird-plants that breed there. The indigenous aborigines killed every stranger, stuffed him with *dzop* feather-leaves, and set him up as one of their innumerable charms. To get by, Feghoot had to pose as an almost omnipotent charm-maker, and everything went along nicely until the start of the *dzop* egg-laying season, which was sacred. Then the Queen came to see him.

"Mighty Magician," she said, "we have always wanted charms made out of *dzop* eggs, but we have never had them because they travel too fast. You are powerful. *You* will be able to catch them."

Dzop egg sacs were modified seed-pods, and great pressure built up inside them. Finally, when the flocks found their meaty blue nest-trees, this became unendurable. Each *dzop* aimed its tail at its tree, and let go. The eggs broke out of their sacs at a velocity of over 2800 foot seconds, and buried themselves deep in the trees, where they eventually hatched.

"Well?" said the Queen, gnashing her eighty-one teeth.

Ferdinand Feghoot did some quick thinking. "Of course I *could* catch them, Your Highness," he answered, "but you can't make an amulet with out-breaking eggs." —GRENDEL BRIARTON

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Fred McMorrow—son of Tom, the wonderfully prolific and able writer for the top slicks—takes us into another bar . . . and a situation which, while quieter than Mr. Leiber's, offers an intriguing insight into the pleasures and pangs of the laws of chance.

THE MAN FROM TOMORROW

by Fred McMorrow

THE REGULARS IN THE NEIGHborhood always went to Riordan's if they were out Saturday night. Now Saturday night is amateur night, but Riordan's was not the kind of place that catered to college boys or people from the suburbs spending a weekend in the city. It was just a nice, dirty, man-smelling place for a man to go and lean on his elbows and get seriously drunk if he wanted to. It wasn't like downtown and you couldn't get into any trouble there because Riordan took care of you.

One of the regulars was Harry Keogh, a newspaper copyreader. This Saturday night he had turned in a night's work and it had been a workout. It was a nasty, snowy night in February, which is about as grim a month in New York as Thursday is as a day in the week anywhere. A plane from Floyd Bennett Field had overshot the runway coming in and had ditched in Jamaica Bay. A train coming into Penn Station from Jersey had socked the hind end of a bunch of Long Island Railroad cars and had knocked them into another train, like making the eight ball in the corner pocket. And a drunk had turned his car into Second Avenue and had headed north, and before he was through seven cars and a pickup truck barrelling down the one-way, southbound avenue had turned into bent tin. Not a scratch on the drunk or his car, though.

So Harry's night had been a siege of new leads and inserts and headline changes and replates, and when he was through he didn't feel like going home right away. He got off the subway at 53rd Street and headed for Riordan's.

There was an old couple at the bar near the door and two young couples in a booth in the back. Down at the far end of the bar,

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at the place where Riordan lifted up the wooden flap to get in and out, was the crazy Irish-Republican-Army-looking guy who had busted his leg on Sixth Avenue the winter before, the guy with the standup bushy hair and the big, thick glasses. Harry never could remember the man's name but he nodded a hello to him as he sat down. The guy just stared. Crazy guy.

Riordan greeted Harry solemnly and poured him a double shot of Old Thompson. Harry, just as solemnly, handed Riordan his copy of the five-star and Riordan sat down at his high stool to study the sports pages. The IRA man took a big drink from his glass and rapped it down on the bar.

"If they haven't got any air on the moon," the IRA men said, "then I want you to tell me what the hell *have* they got up there? Tell me that, Riordan."

Riordan sighed and turned to the obituary page. "My friend," he said, "you've been sitting there five to six hours now, doing nothing but arguing about stupid things and getting drunk."

The man tried to say I'm not drunk but the most recent belt he had taken from the glass took hold of him and it came out "I ma drong." But then he always looked drunk, whether he was or not, like a drunk who has just made up his mind to ram his head through the wall.

"You are drunk," Riordan said, "and you've been sitting there making an ass out of yourself and butting into people's private conversations, people you never saw before in your life, and you're embarrassing me." Riordan gave Harry a big wink.

"I drong? I ma drong," the IRA man said. "You wa me show you I ma drong? I ma drong," and he moved to get off the stool and fell flat on his back. With great dignity, he picked himself up and put himself back on the stool.

"I ma drong," he said proudly.

"All right then, get drunk if you're not drunk," Riordan said. "Might as well be drunk as the way you are. What's new, Harry?"

"Whatever you read in the papers," Harry said.

"What'd you write in this paper?" Riordan said.

"Just a bunch of headlines," Harry said.

"This one here?" Riordan said, pointing to a head that said WIFE SHOOTS COP JUST FOR THE HELP OF IT. "I like that. What's it all about?"

"This cop," Harry said, "was getting ready to go on the four-to-twelve tonight and the wife was loading his gun for him and she had it pointed at the guy's leg and she forgot about the safety and—well, that's what happened. In Brooklyn."

"I like that," Riordan said. "'Wife shoots cop just for the help

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of it.' I like that." He turned back to the sports pages. The old couple at the door put on their coats and shuffled out into the snow. Harry felt the whisky unwinding him.

A tall young man came in and took one of the stools the old couple had occupied. He studied the bottles on the bar with great interest and kept Riordan waiting. Finally Riordan spoke.

"What'll it be, chief?"

"I think that one, there," the young man said.

"The White Label? Yes, sir," Riordan said. "How do you want it?"

"How do I want what?"

"How do you want the drink?"

"Oh, the usual way, I suppose."

"And what, sir," Riordan asked, "would be the usual way?"

"I'm afraid I don't understand."

"I mean," Riordan said patiently, "would you like it with soda; with water; with ice; without ice; in a glass; in a napkin—what?"

"Oh! I'm sorry. In a glass."

"You mean you want it straight?"

"Straight?"

"Look, mac," Riordan said, "I don't like jokers and I don't like nuts in my place and the fact that you come in here without a girl is one strike against you to begin with. Now how do you want this drink or do you want it at all?"

"I guess I'd like it with some ice and a little water," the young man said. "That is, if it's very strong."

"I tell you what," Riordan said. "I'll put the shot in front of you and a glass of water on the side and you mix it to your own pleasure, how about that?"

"Yes, that will be fine."

When he got the drink the young man poured a little of the whisky in the water and watched it mixing with the interest of a chemist. But he did not touch it.

"Something wrong with the drink, sir?" Riordan said.

The young man looked up. "No, there's nothing wrong," he said innocently.

"I thought you might be looking for a goldfish in there," Riordan said.

"Riordan," Harry said, "if the man wants a goldfish in his drink he's entitled to it."

"Only for ladies," Riordan said.

"You know what the mermaid told the sailor," Harry said. " 'If you loved me you wouldn't mind the fishy smell.' "

Riordan cleared his throat. "Friend," he said to the young man, "there's no law you have to drink that, you know. You can do anything you please with it. Put it on top of your head. Pour it in your ear. Throw it on the floor. Take it home."

"Oh, I'm sure it's fine," the young man said.

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"I mean we're not the Salvation Army here," Riordan said. "I mean it's for sale, you're supposed to pay for it."

"I'm so sorry," the young man said. He reached in his pocket and came up with two dollars. He offered them to Riordan. "Will that pay for it?" he said.

Riordan took one dollar and rang up the sale. He put the change before the young man and returned to his stool. "Oh, the hooples you meet in this business," he said, reading the sports page.

"He's a new one on me," Harry said. "I don't think he ever bought a drink before."

Riordan's head popped around and he gave the young man a long, hard look. His rule about minors was ironclad—nothing doing, eighty-six, no sale, on your way. He had always been in good with the precinct and the SLA and he wanted it that way.

"He doesn't look that young," Riordan said. "You think he's a kid, Harry? You think I ought to ask him for his papers, a draft card, or a driver's license?"

"No, I just don't think he's used to drinking," Harry said. "Look, just because you and I started at twelve is no reason other people can't leave it alone until they're twenty-five."

"I guess he's all right," Riordan said. "Looks harmless. Ah, Harry, Harry, the hooples in this world."

He turned to the first sports page. A columnist was talking about the fight coming the next night and the column led off with "You are Joey Hanning and tomorrow night is your moment of truth and . . ."

"Well, tomorrow's the big night," Riordan mused. "Who do you like, Harry?"

"I don't have any opinions about fighters," Harry said. "In fact I don't have any opinions about sports in general. I guess I'm just not a clean-cut American boy."

"I know, you're a spy," Riordan said. "But I mean you like to gamble, don't you? I mean put a buck on a horse or a fighter, you like that, don't you?"

"No, I don't," Harry said. "That's the one vice I don't have, gambling."

"Somebody cured you of it once, did they?" Rordan said.

"Riordan," Harry said, "how did you know that? How the hell do you always know things like that?"

Riordan grinned, showing the gold tooth. "I'm a bartender," he said. "When was it? When you were a kid?"

"When I was a kid, in the army," Harry said. "I used to play crap a lot then and this one day I took a game for something around three hundred dollars. The dice wouldn't quit—nothing but naturals, one after the other, bang,

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bang—I never even had to make a point. Then—well, then I got invited to a friendly little poker game and that was the end of that."

"Well, I can appreciate it," Riordan said. "I've been had, too, and more than once, but I still get a boot out of it. Harry, what are they saying down the paper? Who do they like for tomorrow night?"

"They say Tavarez," Harry said. "They say this Joey Hanning has ki-yi in him and Tavarez will smell it and leave the marks of his five thumbs all over the kid, like a good spanking."

"That friend of yours on the *Times*," Riordan said, "he was in last night and I was talking to him about it. He just got back from the training camp and he said it could be a big surprise for everybody. He said Hanning was like that hoople horse, that Whirlaway. I mean you never know what he's going to do until you put him in there and he starts doing it for real."

"You're a man with a tragic flaw, Riordan," Harry said. "It's like flies with a piece of meat when they wave those long odds under your nose. Listen—if they cut off both my arms and stuck me in there with Tavarez, you'd bet on me. Now wouldn't you?"

"I just might, I just might," Riordan said. "Who knows? You might kill him with footwork."

"How can you bet like that?" Harry said. "How? What kind of a gambler is a guy who knows he's got to drop more than he picks up? What's the sense?"

Riordan put the paper down and gazed out at the snow whipping the dirty front window. Out of the corner of his eye Harry saw the young man looking their way. "You're going into a very deep subject there," Riordan said. "You might say it's a kind of a philosophical subject."

"Philosophy," Harry said. "In school they taught me that word means love of wisdom. Now I can see the love for betting, because if a man loves something he's going to hang onto it and nobody can tell him any different. But what's the wisdom in betting against yourself? Against the simple horse-sense law of averages?"

"Harry, I'll try to explain it to you," Riordan said, "but I know I won't get across because you are neither a gambler nor are you a man of faith."

"A man of faith?" Harry said.

"That's right," Riordan said. "Harry, I'm a bartender and I know my customers. You only hear what you're telling the man sitting next to you and what he's telling you—but the bartender, he's got to hear it all. And I know from listening to you that you're a man who only believes what can be proved to him. And that's not a man of faith."

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"All right, I'm a pagan," Harry said agreeably.

"Let me put it to you this way," Riordan said. "You just put in a night's work and you know you're going to be paid for it. No matter what happens, you know that if you do so much work you get so much money. Right?"

"Right," Harry said.

"And when you sit down to work each night you know that the paper's going to come out, one way or the other."

"Usually the other," Harry said.

"And you know the sun's going to come up."

"Right."

"But you don't get excited about any of that stuff."

"No."

"That's just the routine, every-day stuff that'll go on happening all the rest of your life. There's nothing unexpected about it."

"Very little."

"And that's how it is with most of us," Riordan said. "The same old routine, day in, day out, until the day we drop dead."

"I suppose so."

"So I've got a way to get away from all that every now and then," Riordan said.

"Gambling?"

"That's right. Because you don't know what's going to happen. Because for a couple of bucks you can buy yourself something that's worth a couple of million—a chance to hope for something. Do you get what I mean, Harry? Do you see why a man might want to have something that's a little better than the God-damn routine that's going to follow him into the grave?"

"Well, I guess everybody has to have some way out," Harry said. "Only thing is, I can think of a lot better way to throw my money away. Like how about filling this up for me and having one for yourself?"

Riordan filled Harry's glass. "I'll have one later," he said. "Now I'll tell you something about yourself. Think hard, now. Do you really think the drink is throwing your money away?"

"Oh, hell, Riordan," Harry said. "I made up my mind about that long, long ago. I can say that's one thing I'm not a hypocrite about. I like the drink and I don't mind paying for it when I've got it."

"And I don't mind paying for the horses and the fighters," Riordan said. "In a way it's the same thing. What I do buys me pretty much what the drink buys you."

"If you mean some mornings we both wake up pretty sick I'll agree with you there," Harry said.

"Except," Riordan said, "that one day you might get drunk and I might put five on a hundred to one shot, and it would be a sure thing you'd wake up feeling lousy, but there would just be a chance that I'd wake up feeling like a

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millionaire and having the money to act like one! There's the difference, Harry. With what I do, there's always an if. Maybe it's just a little if, but it's there."

"If," Harry said. "That's what they pave the road to hell with, ifs."

The IRA man had been trying to follow their conversation but now gave up in disgust. He buttoned his overcoat and began a queer soft-shoe-dance of a walk, toward the door.

"That bum Joey Hanning," the IRA man said. "Tavarez kill him. I'm tell ya he kill him and I ma drong." Harry and Riordan paid him no mind. He breathed deeply and from the depths of his soul he moaned, "Oh, ho!" and he went out the door.

"Now that man," Riordan said. "You take him, for instance."

"You take him," Harry said.

"That man is like death and taxes, too," Riordan said. "I can tell you every step he's going to take. Right now he's going down to Gaffney's, and Gaffney is going to turn him out, and he's going to stand on the corner watching the cars go by, and then he's going to go back in Gaffney's and Gaffney is going to turn him out again, and then he's just going to go home. It's always the same with him."

"And he has so much," said the young man down the bar.

"What's that?" Riordan said.

"So much, and he doesn't know it's there," the young man said.

"Yeah," Riordan said. "About the fight, Harry. Do they give this kid Hanning any kind of an edge at all?"

"He looked pretty good in the clubs but he's way out of his class with Tavarez," Harry said.

"I suppose the odds are pretty long."

"Like your arm when you're reaching for a buck."

"Well, maybe I'll give the boy something to ride on," Riordan said. "I like to see a kid taking a chance like that. You've got to admire him a little."

"What chance?" Harry said. "He gets the same money no matter what happens. You know they settle all that in advance, Riordan."

"I don't mean the money," Riordan said. "I mean after everything else it's going to be just him and Tavarez and the big if. I mean it's all going to be right in his hands, whatever happens."

The young man picked up his drink and came down to sit next to Harry. "Mr. Riordan, you're an exceptional man," he said.

Riordan cleared his throat. "It's not that we're unsociable, you understand," he said, "but unless you have business with Mr. Keogh here or you're a friend of his, and I don't think you are, I think it might be the polite and decent thing to do if you—"

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"Don't get on the muscle with the customers, Riordan," Harry said. "It's all right."

"Well, if it's all right with you," Riordan said.

"It's fine, it's swell, I like it," Harry said. "How the hell are you, Charlie?"

"Charlie?" the young man said.

"People I never saw before and probably I'm never going to see them again, their name is Charlie," Harry said.

The young man smiled. "Then you can call me Charlie," he said.

"Right. So what's so exceptional about Mr. Riordan?"

"Maybe it's my sweet and gentle disposition with the hooples I've got to put up with in this life," Riordan said, and went to see if the couples in the back booth wanted refills.

"His attitude," Charlie said. "I heard you discussing gambling. He really expressed himself very well about it. And I don't quite agree with you. I think he shows a great deal of wisdom."

"The wisdom of a sucker."

"No, the wisdom of a man who recognizes values. True values."

"What are you, some kind of a philosopher nut?" Harry said.

"Of course, because he is a primitive, he only sees the surface of his subject," Charlie said.

"A primitive?"

"Oh, yes," Charlie said. "He thinks he must look for excitement—buy it, for instance, by making hopeless bets. He doesn't know—he couldn't know—the wonderful excitement of his life and your life. It's all right around him—right here!"

"Hey, you'd better take it slow if you're not used to that stuff," Harry said.

"What? This? No, I'm not used to it," Charlie said. "But it was such an indigenous part of the Twentieth Century, such a classic form of primitive escape, that I finally had to try it. And I've—"

"Wait a minute," Harry said. "It *was* such an indigenous part of the Twentieth Century?"

"Oh, it certainly was," Charlie said. He had taken half of the drink. "I must say it has a pleasant effect, for a thing so deadly."

"I must say," Harry said, "that I think you need the wagon, and I don't mean the water wagon."

"I certainly don't blame you," Charlie said. "I'm sorry—I keep forgetting that I'm dealing with primitives."

"Look, buster," Harry said quickly, "you've got a right to your opinion, but you start calling me names like that and I'll knock you through the floor, understand?"

"Please," Charlie said, "I didn't mean to insult you, sir. Please—if you'll listen to me I'll explain."

"And don't go calling Riordan things like that either," Harry said. "I've seen him clean out this whole bar when he had to and he doesn't like hooples."

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"You see," Charlie said, "when I was young—I know, I know that sounds strange—when I was young I became a student of your century. I thought it was the most exciting time man has ever lived. So vital, so changing, so dangerous. I steeped myself in your history."

"I think you've been steeping yourself in something else and I think you've had enough," Harry said.

Riordan came back and resumed reading the paper.

"You see, our—well, our world—is entirely different," Charlie said. "Nothing is unexpected. You see, you can look at a leaf or the stars and you can experience the joy of wondering. But we can only know. You can look at a woman and wonder what she's thinking. But we—"

"Brother," Harry said, "if you can figure what's in a broad's head without asking and going to a lot of trouble, I'm with you. Lead me to your time machine. Better still, how about letting me lead you to Bellevue? You need help."

"Yes, I need help," Charlie said, "but there is none for me. Please let me go on."

"Go right ahead," Harry said.

"Right now," Charlie said, "you are experimenting with a process by which a message is transmitted to the unconscious mind by being flashed on a screen at a speed too great for the conscious mind."

"Subliminal advertising," Harry said. "They'll never get away with it."

"Oh, but they did," Charlie said. "It was created primarily for evil reasons, as were so many other scientific creations of your century. But then its great educational potential was realized and it became a blessing."

"A blessing?"

"Yes. You see, it enabled students to learn hundreds of times what they would have learned without it, because it gave them total recall. We all have it. For me, however, it is no longer a blessing, it is a curse, a hell."

Riordan was staring at the young man.

"You only had one, didn't you?" Riordan asked, and Charlie looked blank. "I mean, you only had one drink, didn't you?"

"Yes, and it was very good, Riordan," Charlie said.

"You don't *look* drunk," Riordan said.

"Let the man talk, Riordan," Harry said. "Go on, Charlie."

"I became a historian of the Twentieth Century," Charlie said. "I became a human encyclopedia of every hour of every day of every one of those—these—hundred years. I was considered something of an eccentric."

"I'll buy that," Harry said.

"And I wanted to go farther than just learning. I wanted to be *part* of that wonderful time—this

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wonderful time. I wanted to experience all these things that are happening to you, and not just by reading about them or seeing your primitive films."

"So you hopped in your little time machine and here you are," Harry said.

Charlie looked into his drink. "Something like that," he said.

"Let's go over all this now," Harry said. "Assuming that you're not a nut, which you most certainly are, and that what you say is true, you know everything there is to know about the Twentieth Century."

"Yes."

"You know exactly what's going to happen, every day, everywhere."

"Yes."

"Like in the stock market."

"Yes."

"The Kentucky Derby, a lottery, the Sweepstakes, a war, an election, a prize fight, a bug crossing the room."

"Yes. Everything."

"Still assuming that it's all true," Harry said, "there's no reason you couldn't be the richest man in the world."

"Except for the fact that we—the people of my time—no longer have such motives. The drive for gain belongs to primitive societies such as yours."

"Well, you could have many other things, any number of things. But you're complaining."

"I am."

"Why?"

"For you and Mr. Riordan," Charlie said, "the Twentieth Century truly is an exciting and dangerous time, because you are part of it, you belong to it. And you don't know what's going to happen. You don't know whether all the things Mr. Riordan considers inevitable really will happen. You don't know what's going to happen one minute from now, but I do. You have choice and you are free, because you are ignorant, and believe me, your ignorance is your bliss."

"So the big adventure is just a movie you've seen before," Harry said.

"A million times before. Oh God!"

"'Where ignorance is bliss, 'tis folly to be wise,'" Riordan said. "Why, hell, mister, I know who you are now, you're the ghost of Alexander Pope! Ah, the hooples, the hooples," and he went off to another customer.

"He's a very literate bartender, for a bartender," Harry said. "That doesn't surprise you?" Charlie smiled sadly and shook his head. "Oh, that's right," Harry said. "I forgot, you know all the answers. Look, let's get back to the time machine, the bzzt-bzzt boobly-boobly part of the story. You gotta have a lotta bzzt-bzzt boobly-boobly, you know. So there you were in One Million A.D. and

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you wanted to come down to the Twentieth Century. Take it from there."

"There was a man of science—in your primitive terminology, I suppose the word physicist would describe him—and he had perfected and applied a system involving practical relationships between time and space, to put it very roughly."

"Like the Einstein Theory?" Harry said.

"Nothing so elementary," Charlie said. "Please—you can't possibly understand these concepts. I told this physicist what I wanted to do. I asked if I could offer myself as a subject for an experiment."

Charlie broke off, and his eyes grew tender and almost vague, and terribly, hopelessly sad.

"And?" Harry said.

"And I made an agreement with him," Charlie said.

"Ha! Now we're getting there," Harry said. "This mad doctor of yours. He didn't have a tail, did he?"

"It was the usual agreement," Charlie said. "On the usual terms."

"And now the doctor wants you to pay his bill?"

"I'm afraid I already have," said Charlie. "I made the agreement and came to this century two years ago. And I realized at once that I had been tricked."

"Well, you know, these devils, they aren't in business for their health," Harry said. "They've got to show a margin of profit just like everybody else. You were tricked?"

"Yes," Charlie said. "I came to find danger, excitement, things unknown, wonderful, new exciting things, and I found nothing exciting, nothing dangerous, nothing even mildly surprising, you see, because I knew everything that was going to happen."

"So you put in a call to Dr. Kronkheit," Harry said. "You mixed up a nice stew of chewing gum, bats' ears and dogs' tongues, and the doctor stepped out of the woodwork and wanted to know what was the idea of getting him out of bed at two in the morning?"

"No," Charlie said, "I had no way of communicating with him. He had told me he would be able to keep me under observation, but I couldn't reach him. He also told me that the contract would be terminated at once if I told a Twentieth Century being that it existed. Finally, I decided to do that, no matter what might happen to me. And I found someone who believed me and tried to help me."

"Oh, sure," Harry said, "I can name any number of people right here in this town who'd believe you. The bughouses are full of them. Who'd you talk to? A nice man in a white coat?"

"No, a nice man in a black coat,"

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Charlie said. "A man of faith, like Mr. Riordan. A priest. He said he knew what I had done as soon as he looked at me. He tried to help. He prayed with me. Poor kindly man."

"So what happened after you broke the contract?" Harry said. "Fire and brimstone, a squad of assistant deputy devils with extradition papers made out in blood?"

"Nothing happened," Charlie said. Riordan had come back and had heard most of their conversation, but he showed no reaction.

"Nothing?" Harry said.

"Nothing at all," Charlie said. "And nothing has happened since. That's what makes it so horrible—knowing that nothing is going to happen to me." Riordan took Charlie's glass.

"Ready for another one?" he said. "Or do you want me to call the wagon now?"

"Yes, I'd like another, thank you," Charlie said.

"Kid, you're really in trouble," Harry said. "You know that, don't you? How old are you?"

"I'm two hundred and eight," Charlie said.

"Riordan, call a cop," Harry said.

"Aggghh!" Riordan said.

"I'm not constituted as you are," Charlie said. "Long after you are dead, there will be great discoveries which will end disease and end aging. It has to do with the connective tissue."

"But you're built like that," Harry said.

"Yes," Charlie said.

"So you'll just live on, and on and on," Harry said.

"Yes. I've broken the agreement and here I am in hell," in his voice the weariness of an Atlas, of a millstone-bearing hypocrite, of a soul whispering up from the seventh circle.

Harry noticed that Riordan was staring at Charlie.

"What's the matter with you?" Harry said. "You don't really believe this screw, do you?"

"Mr. Riordan is a man of faith," Charlie said. "You understand me, sir?"

"I think I do," Riordan said, and all the banter was gone out of his voice.

"Riordan, this is a poor sick nut and somebody ought to help him," Harry said. "Be serious."

"I'm dead serious and nobody can help him," Riordan said.

"You've been helpful enough by just listening to me," Charlie said. "I don't expect you to believe me. But it is a comfort to be able to talk to someone. I thank you and I'd like to show my appreciation in some way."

"Why, sure," Harry said, winking at Riordan who returned it with a frown. "You can do this poor gambling man here a great big favor. Just tell him who's going to win that fight tomorrow night and in what time of what round."

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"Hanning will knock Tavarez out in two minutes and fourteen seconds of the third round," Charlie said.

"There you are, Riordan!" Harry said. "Did you hear that? And you believe this hoople? Well, call the bookie! It's the big apple you've been waiting for all your life!"

Riordan, standing where he was, staring at the young stranger, was a mixture of rage and grief, his fists knotted, his jaw clenching and unclenching, the muscles working in his cheeks.

"How about another one?" Harry said. "Riordan's very big with the horses. Who's going to win the Kentucky Derby, Charlie?"

"First will be Star Quality," Charlie said, "followed by—"

"All right, that's enough of that," Riordan said. He took out his wallet and counted out the price of two drinks and flung the bills in front of Charlie. "Take that money and get out of my place," Riordan said.

"Riordan, he's not doing anything wr—"

"Shut up, Harry!" Riordan snapped. "And you—are you going to get out or am I going to throw you out?" Now the veins were standing out on his neck and down the bar a girl gave a little sound like a shriek. Every conversation stopped.

"You're going to throw me out, Mr. Riordan," Charlie said. "I knew that when I came in here—before I came in here. In fact, you're going to come over the b—" and Riordan had vaulted the bar and seized Charlie by the throat and pushed and kicked him to the door and out of it, with a curse, and then Riordan flung the handful of money after him.

Slowly, the bar came back to life. Riordan remained silent and black, and Harry tried to make him crack a smile by ribbing him about spooks and prophets and devils, but Riordan grabbed him by the throat and said he would throw him out, too, if he didn't lay off.

Harry did not remember how he got home to bed that night. His memory was only slightly clearer about how he got up the next night, shaved and showered, put on clean clothes and got to the paper without breaking his neck on the icy streets. But the familiar mechanics, the routine of reading copy and writing headlines was a friendly therapy and by 11 P.M. he was feeling quite human.

For the rest of his life, though, his memory would always be sharp about the bells of the Associated Press machine dinging out the flash-signal at eight minutes after eleven o'clock, and what he saw the robot typewriter tapping out:

FLASH
NEW YORK, FEB. 14 (AP)-
HANNING 3 2/14

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Harry got an early goodnight that night. He went straight to Riordan's. The relief man was running the bar and Riordan was in one of his booths alone, eating a steak. Harry slipped into the booth across from him and shoved the paper, with the big head on Hanning's KO, under Riordan's nose.

Riordan nodded. "I heard it on the radio," he said.

"Well," Harry said, "how does it feel to be a king?"

"A king?"

"An emperor. A god! How much did you put on it—and what did your bookie say?"

"What the hell are you talking about?"

"Aw, now, wait a minute," Harry said. "The *fight*."

"Oh, that," Riordan said. "You mean because of last night, I should have bet on it, is that right?"

"If you don't want to tell me, I'll mind my own business," Harry said, "but I didn't know things were like that between you and me, Riordan."

"Well, I didn't bet on it," Riordan said.

"You—*didn't?* Might a man ask why?"

Riordan wiped his mouth with a napkin and drank the rest of his glass of water and pushed the steak plate away from him and sat back, rubbing his stomach.

"A man might ask why," he said, "but if he had a brain in his head or he could see farther than the edge of the beer glass he's suckin' on, a man could figure it out for himself. Especially an educated, writing man like yourself. The reason I didn't bet on that fight is because it wouldn't have been a bet. The devil doesn't make bets. And that friend of his that I threw out of here, all the money in the world wouldn't buy him the one thing that you and I have got—the one thing that makes life worth living—not knowing what's going to happen."

Harry nodded, slowly. "Riordan," he said, "I'm a very stupid man."

"Oh, no," Riordan said. "You just aren't a gambler. Well, the hell with all that! Listen, if you want a bite to eat you'd better say so, because I'm going to close the kitchen in half an hour."

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A former New Yorker *staff editor and writer, Rex Lardner is now a full-time free-lancer, one of whose current projects is a humorous book on golf. The present evidence of his talent is perhaps best described as a bedtime story of the future, a disquieting tale concerning the perils of the unfamiliar.*

AMERICAN PLAN

by Rex Lardner

"YOUR NAME IS JOHN," I SAID.

"What *would* it be?" He spoke out of the right side of his mouth, over his shoulder. He seemed brusque, even for a late-hour hackie.

I leaned back uncomfortably on the hard rear seat. "Oh . . . being this is Mars, I thought you might have a name like Zrrrk or Srrrm," I said with a mollifying smile. "Or maybe Ooosh."

"Well, it's *John,* buddy. You could read."

The photo on the back of the front seat was the only one I had ever seen of a Martian—somehow they're never in the news back on Earth. Whimsically I thought that to me every Martian's photo would probably look the same, though it would be bad manners to admit it. And I was cosmopolitan enough, even if this was my first trip to another planet, to realize that most Americans probably looked the same to Martians.

"You spell it the same way we do," I said pleasantly.

"How the hell *else* would you spell it? With a Q?" He laughed raucously up front and I stared out the window.

Puppeta-puppeta-pup went the primitive internal-combustion engine as we lurched over rutty roads to Krokol, the capital and most modern city on the planet—the only one, I'd been cautioned by my conscientious travel agent, where you didn't have to boil the water before drinking it. Martian beer, made of fermented hjar, was supposed to be both tasty and cheap, however. In the flickery light of the larger moon (not as big as ours), the tall, dark dunes of the prairie seemed to bounce by, punctuated in the distance by

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shadowy mesas. Not a sign of habitation yet.

"Listen, John," I said, leaning forward a little. "The guy at the travel bureau told me that besides all the cultural sights in Krokol there were some wild doings in the Tenderloin district of the city. Nothing outright—you know? But he gave me a kind of big wink. To sort of get the entire *flavor* of Mars, if you know what I mean. I suppose you know all about the offbeat sights, being a taxi driver and all."

He turned around, his slit-like eyes boring into mine. He stared so long (though it was probably not more than five seconds) that I thought he would run us into a ditch. "Yeah, I know a couple spots," he said. "But it's too late tonight for any kind of action. You're better off going straight to your hotel and doing the tourist bit tomorrow night."

A series of nasty jolting bumps took his attention (and mine, too) for a moment, then he continued, over his shoulder, "But if you want, I could pick you up around ten and I'll park the heap somewhere and take you to a couple of real wild spots." He turned around and stared. "If that's what you want."

I had no intention of touring Downtown Krokol with a misanthropic hackie, no matter how knowledgable, so I said, "Let me take a rain check on that, John."

"What the hell is a rain check?"

"I forgot—you don't have rain here, or baseball. It's an American expression meaning I have to postpone my decision." The thought struck me that maybe Mars' whole trouble was that the poor inhabitants had to spend half their time trying to manufacture water, and that's why they were so backward civilizationwise. Although their culture, being very old, was supposed to be quite OK, with a lot of interesting ruins.

"All right. Take down the number. If I'm out, talk to Henry. He's the dispatcher—"

"*Henry!*"

"For cryin' out loud, buddy—" He turned in irritation and took a deep breath. "He'll put you onto another guide."

I made a show of copying down the number and he faced front. I would have to get the names of lively spots from the hotel manager or from some other American tourist, I figured. John didn't strike me as someone who would wear well for an entire evening.

Now the tall, slender spires of Martian buildings and skyscrapers hove into view (like bristles on a sea urchin, I thought), taller by far than ours in New York and Baltimore—but if we had Mars' low gravity and stable subsurface magma, I'm sure we could build towers three times as high. He caught me looking.

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"Pretty high up, hunh, buddy?" As though he had personally designed and built every one of them. Before I could answer he had jerked to a stop in front of a high building that had a sign on it saying "Commandant Hotel" and over which were some complex Martian hieroglyphics.

"Here we are, buddy. . . . Not that side!" he shouted as I started to try the left-hand door. Irritated I slid over to the right, impatiently pressed a button and the right-hand door slid open. (For all their vaunted culture, the Martians haven't invented hinges yet.) I paid him what the meter said, plus exactly fifteen per cent more. After a bumpy two-hour ride he could see I was in no mood for haggling, so he merely clamped his fist over the money with a dissatisfied grunt, pocketed it and roared off in a cloud of black exhaust fumes.

I raised my head and sniffed the chill air. So this was Mars! Deserted streets, a dark sky illumined by their main moon, with the little-bitty one rising out of the east, the spires across the street even darker outlines against the sky. Silence except for the screech of John's wheels as he careened around a corner a few blocks away.

I turned to enter the hotel, but a thin, stooped Martian with a definite cast to one eye barred the way.

"Me you freng," he said in a whisper. Importuning, his cheek atwitch, he tried to beckon me over to one side. "Me you freng. Take you see what nobody else can show." I moved past him impatiently. He sidled out of the way but, trying a different tack, called after me in an urgent whisper, "Me freng. Listen. You like my sista?" He bounded up to me at the hotel door. "She like you. Listen. Five zotls, no more." He tried to assume what I suppose, in a Martian, was a look of solicitous sincerity, but I was having none of it. The offer was not the least bit tempting. (I only hoped his sister did not have the misfortune to resemble him.) And for all I knew, in some dark corner of the city I might be set on by hoodlums, robbed and dumped into a canal somewhere.

At the desk the night clerk, in a dark, slightly threadbare suit, was scribbling something on a pad.

"Even on Mars!" I murmured, loud enough for him to hear.

"Sir?" He thrust his pen down, looking, I am sure, full of eager efficiency.

"I was just noticing that even on Mars there's never a bellhop around when you want one."

"It's quite late, sir. . . . You have a reservation, of course." He gazed at me blankly.

The idea of traveling millions of miles through space and *not*

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having a reservation was amusing and I chuckled. "Of course. Earp B. Morgan."

"M, M, M, M." From under the desk he produced a long list of names and soberly ran a forefinger down it. "Ah, yes, yes, yes, yes." He swiveled the ledger around and I signed directly beneath a Fred Smith, from North Tonawanda, New York. The scratching of the pen was interrupted by the clerk's imperious clanging of the bell several times.

"Here he comes, sir. *Finally.*" He swiveled the ledger around again with a precise gesture and stared at the signature.

A small bellhop with shiny brass buttons came into the lobby with a hustling gait and the clerk tossed him the key.

"Incidentally," I said. "My luggage. Has it come yet?"

"From the spaceport? No sir, not yet. The visitor's luggage generally arrives about a half-hour after *he* does. It's inefficient, but—" his lips broke apart in a grin— "customs of the country." He couldn't suppress a giggle and I smiled forbearingly at his, I presume, well-nurtured humor. "If it's all right with you, sir, we'll send it up in the morning."

I nodded. "Say," I said, as a thought struck me, "many Americans stop here?" Already—three hours on Mars!—I was nostalgic for the sound of an American accent.

"Oh, yes sir. We're considered the finest hotel in Krokol. So naturally our clientele has a large percentage of American guests. By the way, sir, would you wish to leave any valuables or interplanetary tourist checks in our office safe?"

I told him I thought not and indicated to the bellhop we should be on our way. He let me precede him into an empty elevator, then pushed one of a hundred buttons. The doors hissed closed and we rose creakily.

"What's my room number?"

"7103, sir."

We seemed to go up and up and up.

"You're from America, sir?" he asked, with deference.

"Yes. How'd you know?"

"By your accent, sir."

I was amused by his diplomacy. After a wheezing glide and some rattling, the elevator stopped and the door rustled open. Thinking about bed more than anything else, I preceded him out, then followed him as he padded down a long hallway lit by some glowy chemical that wasn't too luminous. We got into another elevator and started down. Taking a deep breath, I tried not to be annoyed at all this rigamarole.

"I was surprised the taxi-driver's name was John," I said.

"*My* name is Harry, sir."

"John, Harry. That's a good one."

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We seemed to be going down, down, down.

"Incidentally, sir," he said somewhat shyly, "Mars is a dry planet."

I smiled. "I know. I saw your sand dunes on the way here."

"Not what I mean, sir. I mean you can't buy hard liquor."

"No?" I was amazed. "The guide book sure as hell didn't mention that."

"I'm afraid the guide book isn't too efficient, sir. What I'm getting at, sir, is if you wish bourbon or gin, sir, well, I can get it for you. It's ten zotls a bottle. A fifth, that is."

"Later, maybe. . . . How much further do we drop?"

"We're here, sir."

The door rustled open and we were in a large, dark courtyard. The big moon had moved across the sky, and now the little moon was directly overhead. Pretty dark," I said.

"Yes, it is, sir." I could vaguely make out his shape in front of me. "We had bad luck with a fuse earlier in the evening. But just follow me. We're almost to your room, sir."

As I peered at his form, slowly moving ahead of me, I thought I heard a faint lowing far to the left and sniffed a pungent but not unpleasant smell. It reminded me of something, but by now I was too weary for puzzles. "You really *rough* it when you go to Mars," I heard myself saying to the fellows over a glass of good bourbon at the Caucus Club back in Baltimore.

Finally we came to a large sandstone building. The passage he led me down was illuminated by more dim lights and I could barely make out the number on the door. It was 7103, to my great relief.

Harry unlocked it and it slid into the wall. The room flickered and became alive with a yellowish-red light from some hidden source, but I stopped on the threshold.

"Hey!" I said. "There's a man in there!"

"Why, yessir," he said. "We're full up, sir, account of a convention today and tomorrow. Had to double up sir."

"You didn't tell me!"

"I'm only the bellhop, sir."

"The clerk didn't!"

"He must have forgot, sir." We were talking in loud whispers.

"Well, what the hell!"

"Yessir." He looked as though he could have waited all night. "Want to ring him up, sir? That is, if the videophone works. . . . The fuse."

I thought a moment. "I guess there wouldn't be any more rooms."

"This is the last available, sir."

"Well, I guess I better take it . . . for tonight, anyway."

"As you say, sir."

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I went inside, watching him as he climbed up a ladder to a big shallow bowl jutting out from the wall about twelve feet up. He turned on the faucet, looked down for my approval and awkwardly descended.

"Mars is *full* of surprises."

"Sir?"

"No beds."

"No sir."

"You sleep on mats. The floor is all one big mat."

"Yessir, that's what we do here on Mars, sir."

"And no furniture." There was only one thing that looked like a piece of furniture and *that* could have been a mobile. It was a bar suspended from the ceiling.

"I see you've got TV, though." The machine, bolted to the floor, looked like a crude 1950 television set.

"That's the videophone, sir," he corrected me. "For room service. I doubt if it will work tonight."

I stared first at the bellhop, then at the sleeping male figure curled up in his underwear in a far corner of the room, then at the tub. "Here's ten zotls for bourbon," I said. I may need it, I thought. "Bring it in the morning."

"Yessir." He pocketed the money deftly. "Do you wish to be wakened at any special time, sir?"

"Well, I guess about noon—or what passes for noon on this planet."

He hung around. "And here's for you." I handed him a zotl-thirty. He pocketed it without examination, thanked me perfunctorily and started out.

"Oh, by the way, sir." His tone was even more diffident than usual. "May I make a suggestion?"

"What?"

"Your clothes are a little rumpled—I guess from the bumpy taxi ride and the rocket flight—"

"So?"

"Well, sir, we have an excellent six-hour cleaning and pressing service—Korkuvik Brothers. I guarantee to have your suit cleaned and pressed and ready for you to wear by tomorrow noon."

Wearily, after first extracting my wallet, I took off my jacket and trousers and handed them to him. I wished he would get out so I could lie down in my underwear and get some shut-eye, but he had one more piece of information.

"One other thing," he began hesitantly.

I waved a hand at him in a worldly-wise way. "Oh, I've been in hotels before," I told him.

"You may hear a soft knock."

"I sha'n't answer it."

That seemed to satisfy him. "She's discreet. She won't insist." He handed me the key and, with my clothes folded over his arm, stepped out and slid the door shut. I turned out the light and

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lay down diagonally across from my companion who, through all this, had not moved a muscle.

So this is Mars! I thought, lying supine in the dark with my fingers laced under my head. The first thing I would do tomorrow—after a hot bath and a shave . . .

I felt my shoulder being shaken, hard. It was a minute before I realized where I was or whom the bleary-eyed face above mine belonged to. It was my companion, still in his underwear.

"Did the bourbon come?"

"No, the bourbon didn't come." He had a Midwestern accent. "I better introduce myself. We'll be seeing a lot of each other."

"*Will* we?" I sat up and blinked a couple of times in the light.

"I'm Albert Porter from Akron."

"Earp B. Morgan, from Baltimore."

"Glad to know you."

"Glad to know *you*." We shook hands like a couple of tourists.

"How long you been here?" I asked.

"Here? Or on Mars generally? Anyway, it's about the same thing." He smiled a slow smile. "About eighteen months, I guess."

"This sure is different from the Commodore or Cadillac or the Statler back in the States," I said, looking around. "No beds, no TV, no windows, that bathtub—"

"That's not a bathtub," he said with a kind of funny expression. "That's where we eat."

"What a crazy damn place!" I shook my head, laughing. "How do you know if it's day or night, if there's no windows? Have these hicks invented the clock yet?"

He was walking over to the ladder. "I never saw one." The lights gradually got brighter and brighter and the walls became rather mirrorlike. "Must be daytime," he called over his shoulder as he leaned it against the device that hung from the ceiling and carefully climbed up.

"What the hell are you climbing up *there* for?"

"Little exercise," he said.

"How about ordering some breakfast? What do you want?"

"I don't think the videophone works." He had kicked the ladder away and, hanging stiffly by his knees, spoke from an upside-down position. "It hasn't for eighteen months."

I tried it. He was right. "I'm going to give that desk clerk hell," I said.

"Shut up," he ordered. "I've got to concentrate."

He hung by one knee, with the other leg waving stiffly in the air. Then he placed his hands on the bar, drew both legs through his arms, hung for a moment and dropped to the mat on all fours.

"Your face is all blotchy, Porter," I told him.

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Soundlessly, he picked up the ladder and placed it against the elevated tub. As he climbed up, a door above it opened and a grayish hunk of something dropped in. He didn't seem at all surprised.

"Is that breakfast?" I asked. "You don't even have to phone for it?" He was busy eating. I climbed halfway up the ladder and he peered down at me with a dark look, his cheeks stuffed.

"This is for me."

"Oh, for God's sake, Porter." I climbed down, feeling angry enough to march down (or in whatever direction it is) to the desk in my underwear to get some satisfaction, but the door wouldn't open and there was no keyhole on the inside.

"What gives?" I yelled at Porter, tugging at it, kicking at it and trying to slide it one way or the other. More damned Martian inefficiency!

Porter shrugged.

"Have you tried it?"

"Yes, I tried it. Several times."

"How the hell am I ever going to get to see the Tenderloin district?" I demanded.

'You're in the middle of it," he said from his perch, stuffing his mouth full of the gray stuff.

"For God's sake, Porter, you look just like a chimp. What about my breakfast?"

His mouth was full of food and I could hardly make out the answer. But he seemed to be saying, roll over, roll over, and you'll find out.

Pop!

Little Willie, on a toot,
Left the ship in his birthday suit.
Just what killed him, no one knows;
High blood pressure, I suppose.

—Randall Garrett

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Another writer for The New Yorker *(the following is reprinted from that magazine), John Collier also tells a chilling bedtime story. Which suggests that you should skip it for now if you are truly interested in sleep.*

THE TENDER AGE

by John Collier

How pleasant to have travelled the world as you have, Mr. Renvil! Six months here, a year there—always moving on! We parsons are tied to our parishes like watchdogs to their kennels, barking once a week, as best we can, to keep away the Eternal Prowler. Well, Mr. Dodd, I should not mind being tied to such a spot as this. I should like it very much; one gets weary of wandering. I am hoping to be able to stay here permanently; I hope it will turn out that way.

Go back to your chair, Patricia. Mr. Renvil did not come here to be bothered by little girls. He came here to have tea with your father and me. Oh please Mummy, let me sit with Mr. Renvil.

Pattikins, you heard your mother; sit in your place and show how well-behaved you can be. Oh, but really, Mr. Dodd, please don't disturb your little daughter on my account.

Her mother likes her to obey; I am perhaps a little lax in that respect. Let me see—what were we saying? Oh yes, you really think of staying here for good? That will be very nice for us, I'm sure. It's a lonely part of the country. There are very few people of our sort; very few farmers for that matter—very few cottagers, even. It will be very nice for me, Mr. Dodd, if I am able to stay. I have long wanted to make my home somewhere, but something has always come over me, call it a sudden urge if you like, and in a moment my plans are changed and I am off.

Moving on! Moving on! Well you have certainly seen the world, no doubt about that! All sorts of places, all sorts of people! When you were in tropical parts, I suppose you saw savages; they have always interested me. Even cannibals perhaps? Savages, yes, indeed. Savages one sees everywhere, and not only in the tropics. As to

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cannibals and cannibalism, I can't pretend to be an authority on that sort of thing. But I have had enough of the tropics, and of foreign countries altogether. The English countryside is unbeatable, especially the southwest. Your hills and woods here are the very best of it. A garden like this is my idea of heaven. It is here I should like to stay.

Patty, I have told you once, you must not climb on Mr. Renvil. Mr. Renvil did not come here to be climbed and clambered upon. How do you know Mr. Renvil likes little girls? Not everyone likes them, especially when they are ill-behaved. Oh, but I do, Mrs. Dodd. I'm sure no one likes little girls better than I do. I think they are absolutely delicious, absolutely delightful.

I think, Mary, you are making too much fuss. Our guest has told us he has no objection. Let us do him the courtesy of taking his word for it. Patty has taken a great fancy to you, Mr. Renvil. She is not often so eager to sit on anyone's knee. It seems to me, George, you are putting Mr. Renvil quite on the spot, as they say. Do you expect him to come out with it to your face that he finds the child a nuisance? I'm sure he is too polite for that.

I might be, Mrs. Dodd, if it were necessary, but in this case it is not. I think little girls are delectable creatures, especially when they are six or seven. Now, Mr. Renvil, we are blunt people hereabouts. Brutally frank, as some might put it. And I couldn't help noticing last time you came to see us—or was it the first time, after you met my husband on the road? I think it must have been the first time; I don't think Patty was home last Tuesday. Well, whenever it was, she had already begun to clamber upon you, and it seemed to me you were anxious to be rid of her. When she came climbing and squeezing and nuzzling, I'm sure I saw you flinch away. I felt you were quite flustered and upset.

My dear, I really believe you are imagining things, and perhaps embarrassing our visitor. If Mr. Renvil feels anything of that sort I'm sure he will be candid enough to say so, and Patty can go and play with her toys. Yes, dear, but some people hesitate to say they dislike children; it is so often said to be the sign of a bad heart.

I'm sure Mr. Renvil is above such a vulgar prejudice, and I hope he will give us credit for being above it ourselves. Novelists and the people who write for the cinema find it easy to identify the villain of the piece by giving him an aversion to children and animals. They have him kick a dog or slap a child, and this, in turn, strengthens the popular misconception. There was some sort of writer once staying in the village, Mr. Renvil, and he explained it all

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to us. It was most interesting. Children, dogs, and, I think, cats. Not so much cats, dear, because so many people have rather a horror of them. Lord Nelson did, for one, and all sorts of famous people. Dr. Johnson, though, loved his cat.

Dr. Johnson was a great friend of the Church, and now you tell me he was a cat-lover. Perhaps I should be grateful on the first count, but I have never much liked the worthy Doctor, and I shall not change my opinion because of his fondness for cats. I hope you are not a great admirer, Mr. Renvil. I hope you don't think me guilty of lese majesty. Oh no, Mr. Dodd, not in the very least, I assure you. I myself could never feel very warmly about Dr. Johnson. A tremendous mind, no doubt, but he is not one of those great figures I could imagine myself meeting and liking if we were contemporaries. I was greatly put off when first I read of his eating habits. When I think of a man gorging and gulping like some ravenous cannibal, some ravenous animal, with his face bent over almost into his food, and the veins swelling out on his forehead, it makes me positively shudder, as if someone were walking over my grave. Excuse me, Mrs. Dodd, if my description is unpleasantly vivid. I am quoting almost exactly what I read.

Oh, I don't shudder so easily, Mr. Renvil. I am not one of your sensitive persons! I am thick-skinned. I am the practical, down-to-earth member of the family. But tell me frankly, and once and for all—are not sticky little fingers, and huggings and nuzzlings, rather unpleasant to you? Because I really thought I saw you shudder, just as you describe, the first time Patty came climbing on your knee. Well, I am not a family man; I am unmarried, as you know. That may make me a little awkward. But as it happens I have the very greatest fondness for little girls. Little girls of six or seven—to me at that stage they are just at perfection. They are formed already, and still so fresh and tender, and they have such charming ways. They have not yet reached the lanky stage or the scrawny stage. They positively melt in one's heart.

And little boys? Do you like little boys equally? We put Patty first, of course, but we have often wished she had a little brother. I like little boys, Mrs. Dodd, but they are so very tough in these days, with all the comic strips and the cowboy pictures. A little girl like this one on my knee—I don't think I could ask for more.

Well, Patty, it seems that Mr. Renvil does not mind you too much. So I suppose you may stay where you are until he puts you down. I know Mr. Renvil likes me, Mummy. I knew it all the time. The very first day he came to tea he whispered in my ear. He whispered he could eat me up.

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I think I know what misled you, Mrs. Dodd. I have some sort of little nervous twitch every now and then. I sometimes give a little start and shudder. Why, yes, I just noticed. I think no one would notice unless they were watching as I was—watching, I mean, to see if Patty was bothering you. I think highly strung people, people of talent, often have a little nothing of that sort. Like Lord Nelson and his aversion to cats. Mr. Dodd has a cousin who is extremely gifted musically; it is thought he could have played at concerts had he really taken it up. He sometimes starts almost out of his chair.

Do you like pussycats, Mr. Renvil? Would you rather have a little girl or a pussycat? Oh, a little girl, Patricia. I don't like cats at all.

Would you rather have a little girl than a bunny rabbit? Why, yes, indeed. Rabbit is quite nice, but I would rather have a little girl.

There used to be lots of bunny rabbits but they all died because of a wicked disease. I think there is one who lives in the big wood on the top of the hill, but Daddy won't take me there. Now, Patty, you are always whining and wheedling to go to the wood. Daddy has the parish to look after, and Daddy has his sermon to write, and he has told you there are no rabbits there anyway.

Shall you keep the house you are living in at present if you decide to stay, Mr. Renvil? I hardly think so. I shall probably look around for something a little larger. One never knows, of course; one's plans may change at a moment's notice. But I do sincerely hope that nothing will prevent my settling here.

No more sudden urges, eh? Well, we shall be glad if you can avoid them. The wanderlust, I suppose you would call it? A hunger to be moving on, moving on. I suppose so, Mr. Dodd. It's a matter of fate. I suppose. I think you might describe it as a sort of hunger.

Mr. Renvil, if you had a little girl would you take her to the wood? Yes, my dear, I very well might. I am not clever enough to write sermons, so I have more time than your father. It would be very nice to take a little girl to the wood.

Ah, the church clock, striking six! The sunset gun, I think they call it in India or somewhere. We have finished tea long ago. Can I persuade you to take a glass of sherry, Mr. Renvil? An apéritif, as they say in France? No thank you, Mrs. Dodd; I have no need of it. It is high time I was on my way. I am walking this evening, and if I am not home by seven I shall hear murmuring in the kitchen, quite loud, and very gloomy in tone. I am most grateful for your kindness, Mr. Dodd. Thank you both so much. And I will try, indeed I will, to control any sudden urge.

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Patricia, may I kiss you goodbye?

Mummy can I walk up the road with Mr. Renvil? Can I walk with him as far as the wood? I could just peep inside and see a great, big bunny rabbit. Now, Patty, Patty, Pattikins! I think Mr. Renvil has been more than nice to you already. It is time to stop asking things and bothering him.

It would be a pleasure to me, Mrs. Dodd. You have no idea what a pleasure it would be to me. But it must be at least half a mile to where the woods begin, and half a mile back again. I'm sure those plump little legs would not carry her more than half as far. And I could hardly see you walking back all alone, my dear. Oh yes I could, Mr. Renvil. I go all by myself to the village, and that is farther than the wood. I walk there and back all by myself, all alone. Don't I Daddy? Don't I Mummy? Please Mr. Renvil, ask Mummy to let me go with you to the wood!

Now, Patty, that is whining and wheedling and nuzzling up all in one. Mr. Renvil doesn't know what to do with little girls who cling. You are strangling him; you are taking his breath away. Mr. Renvil can hardly breathe. Mary, my dear, I think we are having altogether too much fuss over Patty this evening. The child can walk back by herself; Mr. Renvil has said she will be no trouble to him. It is daylight still; we have no bandits or wolves in this part of the world. She can be back in half an hour or so, in ample time for her supper. She will be off your hands when you are busy, just when she is most trouble to you.

Well, very well, if you really don't mind, Mr. Renvil. All I hope is that Patty is not too much for you. Don't let her give you one of your sudden urges, just as we are hoping that you settle here. Oh, as to that, Mrs. Dodd, it is a matter of fate, a matter of fate. No man can avoid his destiny.

Come, my little dear, we will walk together to the wood, and if there is time enough we will take a tiny peep inside it. Can we really, Mr. Renvil? We'll see a great big rabbit. Goodbye, Mummy! Goodbye, Daddy!

Goodbye, Patty! Goodbye, Pattikins! Goodbye, Mr. Renvil!

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The familiar empire builder of the past has been a driving, indomitable individualist more notable for accomplishments than lovability. Will there be room for such in the more tightly knit societies of the future? . . . And for another, different look at an irresistible force in action, see the Arthur Porges tale. . . .

ONE ON TRIAL

by Gordon R. Dickson

THE PLACE THEY EMERGED into—the General wheezing a little spasmodically like a man with something stuck in his gullet, but trying not to show it—was a pleasant little glade, vaguely tropical in appearance. The General—everybody called him that now that he had become a sort of terrible old man, although he had no real right to the title—paused just inside the screen of bushes; and his companion, the box-like machine on stilts, also halted.

As they stood there, there was an odd, baritone moan of pain off in the pines to their right. A sound like that of a giant quietly suffering. The General turned, conscious suddenly that he had no direct memory of how the sanity technicians had brought him to this place; and a magnificent, black-maned lion with tawny, rippling fur limped into the clearing, holding his right forepaw awkwardly clear of the ground.

"Fear not," said the machine. "I will protect you."

"Who's afraid?" exploded the General. "I haven't been scared for forty years. They said war would shake the guts out of any civilian officer—but it didn't me. They said I'd never have the brass to put five billions on the line to open up the Sahara—every cent I had, every cent I'd ever made. But I did." He looked toward the lion, which was gazing off to one side of them. "Now what? What'd they stick this beast in here for?"

The machine did not answer. Looking closer, the General perceived a heavy black thorn embedded in one pink-and-dirty pad of the upheld paw. The lion turned its head toward him and again made its low, heart-rending moan. The General shook his head and turned away.

"So limp," he said, and strode off. The machine trundled after. "Quit crowding me!" snarled the

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General, as he pushed through a small stand of tall ferns and emerged on a sort of animal track, leading down amongst bushes and tall purple flowers like lilies. "I don't have to explain myself to you."

"I am only here to hear anything you have to say," said the machine, in its pleasant, sexless voice. It leaned to him almost confidentially, a rectangular, gunmetal box on four dull-shiny, stilt-like legs of adjustable heights. "To accompany you and protect you. But to demand nothing."

"You're a cute hunk of junk," said the General. He went down around a curve in the path and found himself on an open hillside. He stopped. "You might store up in that tin brain of yours one fact," he said. "I could have dodged this business, if I'd wanted to. You think I lived sixty years without finding out how to get around a simple health law? But no board of directors are going to run me. . . . This the way out of here?"

"That could be interpreted as paranoia," observed the machine.

"Could it now? Well, well," said the General, with the throatily purring pleasure of a tiger lying at its ease with its eyes closed, cracking bones in its teeth.

"Persons with paranoia are a danger to society," said the machine.

"Society's yellow," said the General. He paused. "No, you wouldn't get that, would you? . . . About that lion; what good would it have done if I'd taken the thorn out of his paw?"

"It would have eased his pain," said the machine.

"Yeah," said the General, like a man spitting tacks. "I asked you before—this the way out of here?"

"The only way out of here," said the machine, "is for you to discover for yourself. You may save yourself, or destroy yourself, but those are the only two alternatives there are for you here."

The General reached out and pounded with one skinny, brown, hard fist on the side of a nearby boulder of grey-speckled granite half as tall as he was.

"It's real?" he said.

"Absolutely real," said the machine. "An illusion would have no practical curative force. That lion back there *might* have killed you."

"I'll take my chances with him," said the General. He began to descend the slope of the hill among the ankle-high, sharp-edged grass, setting his feet down carefully sideways, so that the slick soles of his business shoes would not slip. He was a little stiff, and one ankle joint cracked dryly as he put his weight on it, the way a knuckled-joint cracks. Halfway down the slope, he became aware of a faint, thin screaming off to his right, and stopped to look.

For a second he could make out

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nothing but the grass, and then a small stir of brown caught his attention. He stepped over a few feet and discovered a large dirty-white hare caught by a noose that encircled its neck and one fore-paw. As the general stepped up close, a small, brown weasel-shaped animal with lusting red eyes backed rustling into the grass and disappeared.

The General looked down at the hare which looked back up at him with the drowning eyes of all helpless wild animals. The General considered it, his sour, grey, old-man's fierce face unmoving.

"Another," he said. He spoke aside to the machine. "What was that after it, just now?"

"A ferret," said the machine.

The General gave a sort of a humphing grunt, and turned away, down the slope. The machine rolled smoothly after him. Behind him, the screaming began again.

"You could have let the hare loose," said the machine. "You could have given it that much of a chance."

"Is that so, Doctor?" said the General.

"I am not a doctor," said the machine. "I am a mechanical attendant only. You need not personify me."

"I'll personify your ——" said the General, coarsely. "You know who I'm talking to. All the fat little people who want things nice and cosy. I've killed more men, directly and indirectly, than one of you greasy little characters ever saved in your dedicated minuscule lives—and I built a new world doing it."

"No one denies," said the machine, "that you have been responsible for great and good changes all over the planet. However—"

"Why didn't you shoot me, if you wanted to get rid of me?" said the General. "By Moses, I would've."

"We did not shoot you because of a humanity you were never able to recognize," said the machine.

"I recognized it all right," said the General, tripping over a tree-root at the foot of the slope and stopping to swear vulgarly at it. He was getting a bit short of wind, and feeling tiredness. His age showing. "I just couldn't afford the stuff." He ducked in under some low-hanging elm branches and found himself in woods again. "Where do I go from here?"

"Your path is up to you," said the machine.

"Onward, then," said the General, taking off in the forest darkness over a thick, soft blanket of pine needles. He bit his lean old jaws together against the shadowy chill in this low spot, chill that struck through his thinness and made him shiver under his skin for all his determination to hide it. Slow blood, ancient blood, cool

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blood—quickly chilled blood and bones. That's what he was, nowadays. "*—The day of the iron gods is past, and now we set up little mud idols,*" he muttered between teeth carefully closed and held against chattering.

"I do not know the quotation," said the machine, after a slight pause..

"Damn right you don't," said the General, warming himself with a little spurt of anger; "it's from something I wrote myself, for myself."

"You have written?" said the machine.

"And sketched, and made up songs, and looked at sunsets, and picked flowers—hell, yes," said the General. "I've been in love, too, for your information; though I never saw any reason to get these things into the papers. Nobody's business but my own."

"A public character belongs in part to the pub—" began the machine.

"Go back and tell the public that if they think that, they're wrong," said the General. "They never did anything for me. I had to do it all for them; and when I finally got where I was aiming at—" He tripped suddenly, and fell heavily, wrenching his back in a painful manner, although the thick bedding of pine needles he fell on cushioned his fall. He lay there for a second, then sat up, and tried to get to his feet. One ankle, he found, was locked and held vise-like by something.

He looked closer and discovered it was entrapped by some sort of metal band that had closed upon it. From the band, a metal chain led to a metal stake driven almost entirely into the flinty earth below the pine needles. He tugged on the chain, but the stake did not stir.

"Cute," commented the General, through teeth locked now against the pain in his back. He felt around in his pockets for something to dig with. He had always been in the habit of carrying a penknife. It was not there, of course. Nothing was. After a moment, he thought of his belt, took it off, and began to pick away at the dirt around the stake with the metal buckle. The dirt gave grudgingly. "Come to think of it," he said, aside to the machine, "all this business could be a polite and legal way of shooting me after all, couldn't it?"

"I assure you," said the machine, "this is merely demonstrated psychotherapy, a situation contrived so that you may have an opportunity to discover the error in your personality and correct it."

"But it can kill me," said the General.

"Excuse me," replied the machine, "you can force it to kill you."

"Thereby revealing a deathwish," said the General ironically.

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"That could be one possible interpretation of your refusal to discover your error in viewpoint and correct it, yes," answered the machine. "After all, your decision to undergo this therapy was voluntary—"

"In a pig's—" said the General, "I do not make sense out of that last statement of yours," said the machine. "You seemed to fail to complete the thought."

"Finish it yourself," grunted the General, digging around the stake. He had got down about three inches on each side, tearing the skin of his fingers, however, in the process. "I said, the hell it was voluntary."

The machine said nothing. It stood there in a silence that had something polite about it as the General dug at the earth about the stake with his belt buckle. As for the General, he went back to talking, having discovered it took his mind off the sharp arrows of pain now shooting across his lower back.

"I've probably slipped a disc or some such stupid thing," he told the machine. "Yes, I said the hell it was voluntary. It was go through this rigamarole or turn half the world over to little fat-brains like that board of directors."

"It is merely a question of competency at your present age," said the machine. "You should not be set completely aside, only required to surrender active control of the five heavy industries and the two services in question."

"What other kind of control is there?" grunted the General. "I went from Administration Colonel to Chief of Staff in two and a half years of war. High as I could go. Never wore a uniform since—for all the title stuck; but I could step back into command tomorrow and make things hum. And those jokers know it. Same thing with anything else in the world. I'm the roadblock in the way of every ambitious corporation head and high executive in the world. Since I stood the world on end like Columbus did with the egg, they all want to try it. They want to get back to chewing on each others' throats. Well, I'm not about to let them." The General chuckled suddenly, in spite of his back, " *'For lo, the earth is laid in the peace that I just made, and lo, I wait on thee to trouble it.'* "

"Kipling," commented the machine, "incorrectly quoted."

"Correct or incorrect, who cares if the sense is there?" said the General. "I'll go buy myself a set of monkey glands a couple of months from now, go off, rejuvenate, and come back to plague them as a young man again. How'd they like that?"

"There is no connection between any glands possessed by monkeys and the possibility of rejuvenating aged humans," said the machine.

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"You got a tick-tock soul," said the General. "To hell with you." He dug away at the stake for some moments in silence. He was about eight inches down now and he laid aside the belt buckle for a moment, took hold of the stake and tried to shake it loose from its bed of earth. It did not give.

"They must've got it anchored someplace down in China," said the General. He looked up at the machine. "What happens if I never get loose?"

"If you do not get loose," said the machine, "you will not get loose."

"I see," answered the General, "dehydration, starvation, eventual extinction, eh?"

"Probably not," said the machine. "There are a number of carnivores in the vicinity."

"Me and the rabbit," said the General, getting back to work with the belt buckle. Then he paused for a second and for the first time heard the noises of the wood around him—the stealthy rustles, the distant snapping of a twig, the little undecipherable noises.

"So, you have made the connection," said the machine.

"Lo, and stand aghast," sneered the General. "Is this the consequences of me own actions come home to roost at last?" He was not —had never been—a good mime; and the ridicule with which he attempted to infuse his words was heavy-handed. He scraped a little more dirt out and reached down into the hole alongside the stake. "What d'you know?" he said to the machine. "I've dug out all the earth, but the stake seems to be accidently caught in the crack of a boulder. I won't be able to pull it out after all."

The machine did not answer immediately.

"Well?" said the General. "What's your comment on that?"

"I have no instructions to cover such a situation," said the machine. "I—"

It broke off suddenly, half-turning about. The General looked up and off in the direction in which it now faced. Amongst the trees and dappled by their shade, some dozen yards off, stood the black-maned lion, one sore paw still upraised. As the General's eyes met the beast's yellow ones, the lion rumbled softly in its chest, and limped forward a step.

"Still waiting for instructions?" said the General, in a low, calm, even tone, looking at the machine.

"I am still—" began the machine and stopped again.

"Something gone wrong with the machinery?" asked the General, grinning sourly. The lion moved several steps nearer. In the gloom, the General could see its tail swinging back and forth, although still held low. The machine did not answer.

"I take it you're not going to

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protect me," said the General.

"I have no instructions—"

"I suppose Carnway is behind this," said the General, "or Chandra Lal—or the Eastern Transport bunch, eh?"

"I have no knowledge—"

"Sure," said the General, eyeing the lion, who was beginning to hunch its shoulders a little, its tail motionless, and rising slowly as its eyes glowed unmovingly upon him. "I wondered if they'd stick their necks out this much. It's just what I need. And just in time, too—for now I see the error of my ways. You hear me? How could I rob all those poor widows and orphans? How could I be so hard-hearted to my business enemies? Now I see it all—what I lacked was compassion, the kind of compassion that risks death to take a thorn from the paw of a suffering lion, or the trouble to release a rabbit from the trap where he's lying and squeaking, all helpless. I see it all now. Halleluiah! And from this day forward I intend to mend my ways, making reparation to all those I have wronged. How's that?" demanded the General, looking over at the machine. "Think my life's worth saving, now? Therapy successful?"

The machine half-turned toward the lion, then abruptly froze. A peculiar shiver ran over it. A faint, rattling noise issued from its talk-box, and suddenly its spiky limbs gave way and it fell stiffly over sideways onto the pine needles.

"Well, now, boys," said the General, speaking to no one but the empty air. "This was a mighty cute trick you pulled; and if just one of you had thought of it, and done it all on his own, it might have worked. You might take a lesson from that—a good man doesn't need any help with his dirty work." He looked once more at the lion, who was now just about ready to charge, and began to cough.

His coughing interrupted the tensing of the lion. The big cat straightened up slowly from its incipient crouch. Its tail lowered and began to twitch once more. The General went on coughing; and his coughs progressed from just a polite hack to a whoop, and then to a tearing, retching paroxysm that twisted his body double convulsively and caused saliva to glisten at the thin corners of his mouth. Bent over, he coughed like a man who was tearing his lungs out; and, after a few long seconds, a small black object flew from his lips.

He straightened up and cut off the coughing with an effort. His lean hand scrabbled for the black object—it was a tiny cylinder—and clawed it up out of the pine needles. He held it before him, pinched it, and swung it in a short arc.

Flame spurted near-invisibly

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from the object's further end, and an arc of fire sprang suddenly up before the lion as the pine needles along a thin curved line there burst into flames. The lion sprang into the air like a startled tabby cat, and disappeared.

The dry pine needles caught rapidly. A limb of a nearby spruce caught and crackled alight quickly —almost too quickly, a part of the General's mind noted, for a live and growing tree. But he, meanwhile, still coughing, was bent over, directing the fierce near-invisible pinpoint of flame from the black cylinder at the metal chain, which melted in two before it like a chain of lard. Coughing again from the smoke, the General scrambled creakily to his feet. The nearer trees were ablaze now, and the fire in the pine needles was spreading. The General turned and stumbled hurriedly away from it, bursting once more out of the trees and onto the hillside, up which he panted.

There was noise all around him, a crying and shouting of animals, the gathering roar of the fire, and occasional crash of a falling tree. Gusts of smoke blew to him intermittently, and, as he reached the top of the hill, somewhere ahead above the upper forest a section of the sky fell out, leaving a black rectangle reaching halfway up the firmament. Coughing the smoke out of his raw lungs, the General grunted in satisfaction.

He plunged into the upper forest, shuffling now in an old man's stubborn run. A great, fat boa-constrictor wriggled by him; and the General's fingers closed on the black cylinder. But the snake paid him no attention. It, like the lumbering porcupine they both passed, and the young deer, brown eyes glazed with fright, who passed them, was in flight from the flames below; and all were heading toward the black empty section of sky ahead—from which a strong current of air was now blowing into the draft of the fire.

The fire, the general saw, was threatening to ring them all, being held back directly behind them by the incoming draft but spreading rapidly in two horns of a crescent on either hand. He passed a small antelope limping, with one leg broken, and a wildcat shrieking high in an oak tree. He splashed through a small pool, missed his footing, and flung out a hand to a floating log.

A small brown figure pounced at it, teeth bared. The General stared. It was a ferret—surely the same one he had seen stalking the noosed rabbit. It challenged him to share its log, tiny teeth bared.

Grinning suddenly—though the unusual spasm of facial muscles set him coughing again,—the General reached out with one hand and scooped it off the log, holding it with painful firmness by the nape of its neck, while it

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squirmed and twisted to get at his hand or wrist.

"Okay—pardner," gasped the General, in a hoarsened voice. "We'll make it out together, you and I. Then you can get back to your rabbits; and me to Carnway and the rest. All I gambled for was for them to stick their necks out—to really try for me by breaking laws. Now I'll go *chop!*"

The General waded forward out of the pool, stumbled over a hollow in the ground, and turned one ankle—but limped grimly on.

". . . they had any sense," he rattled hoarsely to the kicking ferret, "they'd see I was necessary. Like you, pardner. They *need* me —*me,* just the way I am. Widows and orphans. If I was the sort cared about widows and orphans how the hell could I stand the world on end?"

His hurt ankle turned under him suddenly; and he went down on one knee. The flames were roaring up the slope behind him. He found a stick and hoisted himself up again. He lurched onward.

"Hang on," he snarled at the ferret. "Another fifty yards. I can see it now, through the trees, the section where they opened up this crazy house. There'll be rescue squads from all over the city out there." He laughed hoarsely, and it started him coughing again. "Catch them starting anything now. . . ."

Just then, the General broke through some juniper bushes and saw the black corner of the opening gaping through a wall of holly trees before him. He lurched toward it; and as he did so, the ferret managed to get itself turned around at last in his grasp and it sank its small needles of teeth into the ball of his thumb.

"You little bastard," snarled the General fondly, shaking the small beast loose from its toothhold, and cuddling it harshly to him as he limped on, stumbling but triumphant, through the holly trees sharp fingernails and on into the exit.

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It was in F&SF for October 1953 that Arthur Porges first reported on the ruum—that impregnable, irresistible specimen collector left on Earth by a superior race. Mr. Porges here delightfully brings his report up to date.

A SPECIMEN FOR THE QUEEN

by Arthur Porges

PROLOGUE

The cruiser *Ilkor* had just gone into her overdrive beyond the orbit of Pluto when a worried officer reported to the Commander.

"Excellency," he said uneasily, "I regret to inform you that because of a technician's carelessness, a Type H-9 Ruum has been left behind on the third planet, together with anything it may have collected."

The Commander's triangular eyes hooded momentarily, but when he spoke his voice was level.

"How was the ruum set?"

"For a maximum radius of thirty miles, and 150 pounds plus or minus fifteen."

There was silence for several seconds, then the Commander said: "We cannot reverse course now. In a few weeks we'll be returning, and can pick up the ruum then. I do not care to have one of those costly models charged against my ship. You will see," he concluded coldly, "that the individual responsible is severely punished."

But at the end of its run, in the neighborhood of Rigel, the cruiser met a flat, ring-shaped raider; and when the inevitable fire-fight was over, both ships, semi-molten, radioactive, and laden with dead, were starting a billion year orbit around the star.

And on the earth, it was the Age of Reptiles.

Ruum: The ultimate in a specimen-collecting robot. Self energizing, it utilizes every known band of radiation to accumulate power. It is practically indestructible, the only regions barred to it being the interiors of stars. At present, some twenty types are officially authorized. Among these are ruums designed to collect specimens weighing from 0.001

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pound to over fifty tons, at velocities beginning with inches per minute to miles per second.[1]

The space-ship landed on the daylight side of the earth in a region of inhospitable, snowy peaks, deliberately bypassing the many big cities which showed up clearly on the screen, even at a thousand miles above the troposphere. This was standard procedure for a scout. The invariable policy of the bee-people was to snatch an isolated individual and retreat. The examination of their captive, carried out well away from its kind, could always be depended upon to type the opposition.

Naturally, with generations of colonizing behind them, the raiders knew enough to ignore the relatively unintelligent flora and fauna which usually shared civilized worlds with their dominant forms. They looked for a lone specimen using power, or at least sophisticated tools, confident that it would be reasonably typical of the city-building race. No attempt was ever made on this first snatch-and-run operation to approach any large community. Not through fear, of course, but merely to avoid alarming, and possibly alerting, their victims too soon—although this was routine caution, since a fleet of these scouts had ravaged the planets of a whole galaxy without a serious challenge to their superiority as fighting machines. The few races that had space-ships still floundered from one world to the next, and were no match for these heavily-armed, interstellar raiders, assassins backed by hundreds of years of superb technology.

Although this was one of the bee-people's smallest scouts, it was set down boldly, with almost nonchalant arrogance. For one thing, while hovering far above a large city, they had detected only minor applications of atomic energy. The inference was obvious; this race was in its technological infancy compared with theirs. Consequently there was nothing whatever to fear.

"I wish," Captain Zril buzzed, "that we might find just one planet, *not* of the same old carbon cycle, that supports a new kind of life. Who could have guessed originally that all living things are oxygen breathers and confined to environments very nearly identical throughout the universe? A tiny variation in the upper ozone layer, a break in the nitrogen-bacterial cycle, and —*zzst!*—life ends. Oh, for something new."

He raised his 162 pounds of jointed body erect upon the last pair of legs, and with his four filmy wings dropping, sighed: "I suppose we may as well grab the usual so-called intelligent being,

[1] PRIMER OF ROBOTICS, Eighth Edition.

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if any, and leave. 'A Specimen for the Queen,'" he added, using the official phrase without irony, for the giant, immobile, egg-laying female was sacred to every bee. "We're about ready to go home, anyhow. Soon the colonizing armada will set out to subjugate all the suitable planets we found. I almost feel," he concluded wearily, "that it would be a relief to meet some life-form high enough to give us just a little real opposition. How many generations has it been since our people fought a war?"

"We won't find one here," Lieutenant Briz said. "All I've seen in this area so far are subordinate species, ignorant of tools and power. Many of them are tiny, with wings. They couldn't possibly be responsible for those cities. Maybe the intelligent forms shun this part of the planet. If so, we might have to search elsewhere."

"Going home," Sargeant Srt shrilled, his thoughts still on the captain's remarks. "Am I glad this boring tour is about over. Tell you what, Lieutenant, I'll bet you my ration of honey that our last specimen screams more under the dissecting knife than that feathery quadruped from the second planet."

"Agreed," the lieutenant retorted instantly, his compound eyes alight with gluttony and malice. You forgot, Sergeant, that it's my turn to use the knife. I'll see that he outdoes the quadruped. I have a flair, you know, and a profound knowledge of all types of nervous systems." At the sight of the sergeant's drooping palps, he buzzed with delight.

"That'll take some doing," the captain remarked. "How the feathery thing squalled. . . . You're not the only one who understands nerves," he rebuked Briz. "I—" He broke off as a sibilant call came from the fourth bee, on watch.

"Something interesting, sir," Technician Wrzs announced, gesturing towards the visiport. "Intelligent life, beyond a doubt. We won't have to look any further." He stepped aside respectfully as the captain approached. Peering through the glowing viewer, the commander saw a greyish object, quasi-spherical in shape, rolling along in a leisurely, almost contemplative manner. At the other visiport, his three subordinates watched with approval.

"Undoubtedly a vehicle of transport," the lieutenant assured his crew. "What do you read, Wrzs?"

"Not atomic, sir," the technician replied, studying the bank of dials.

"Could it be shielded?"

"Nothing that small could keep hard radiation in," Sergeant Srt volunteered. "A more primitive power source is indicated."

"In any case," the commander

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said with satisfaction, "there's a fairly advanced life form inside, and we'll soon have completed our mission. Then for home!"

"Seems a bit bored," the sergeant hummed. His palps quivered eagerly. "We'll cure that fast enough. When he's shucked out of his ingenious little vehicle, and our wager is being settled, life will become distinctly more interesting for him, although he'll be anxious enough to part with it! Shall I snatch the machine up with a force beam, sir?" he asked the captain.

"No. It may not even be necessary. See, he's studying us. Another of these naive races who expect to be treated as friends and equals. Don't grab him unless he runs."

The globular, leathery object was indeed examining the spaceship by means of lens-tipped rods and other more complex detectors, vaguely electronic in appearance. Finally, with an air of calm resolution, the ruum retracted all its instruments, and at a speed of five miles an hour, rolled towards the raider, assured that it held four creatures new to its collection, and of ideal mass. Although a ruum is obviously incapable of boredom, it is true that for many centuries there had been little left to do. Except for a certain encounter with an elusive biped twenty years earlier, life had been altogether routine. Prowling within its thirty mile radius, the ruum was unable to find any new specimens in the 135-165 pound class to which its setting restricted the robot. When it had rounded out its gallery of preserved animals with a hairy-chested, bearded, big-game hunter and writer, the ruum was reduced to aimless patrols and a vague elec-tronic hoping. Its strange collection, like some fantastic butcher shop, included everything from small stegosaurs to man—every life form to be found in the Canadian Rockies since the age of reptiles. The region had been closed to humans for many years now, the government having wisely given up its attempts to destroy or even immobilize the incredible spheroid.

"Well," the lieutenant exclaimed cheerfully, "it's rolling right to the slaughter. It's going to be a pleasure to colonize this planet, I can see that. Shall I open the ramp to the specimen prison, sir? I wouldn't be surprised if the stupid thing came right in. I wonder," he mused happily, "if it will scream, bellow, whistle, growl, or buzz."

"Certainly not buzz," the captain reproved him. "Only the highest of the intelligent life forms buzz. They and the tiny insects we've found in a few places. And even the insects are advanced at least to the point of serving their race above all else. But yes,

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lower the ramp; this is specimen collecting in luxury."

The metal gangway swung smoothly into position, and without a moment's pause the ruum rolled up into the thick-walled, well-equipped laboratory. Soundlessly the massive door clicked shut behind it, and in the control room a hum of derisive laughter arose.

Now there is nothing devious about a ruum: it is a simple-minded robot with a unique, though routine, job to be done. It is more subtle, in its operations, than a battering ram, since it takes the most direct measures called for, even though they may be relatively complex.

As a battery of bright lights—sodium, ultra-violet, infra-red, x-ray, and others unknown on earth—illuminated the dissecting room in a preliminary survey of the raider's catch, the sphere extruded a few instruments of its own. It took only seconds for the robot to conclude that the specimens it needed were still out of reach. The ruum paused, took some bearings, and rolled to the North Bulkhead. That way—there—said its meters. Four 160-pound specimens you've never found before. You know what to do.

Meanwhile, Lieutenant Briz, filled with mild anticipation, was saying to the sergeant: "First I'll pry him out of the vehicle. What's the odds he's an air-breather?"

"Not a fair bet, sir," the other protested. "A gilled animal wouldn't be running around on dry land so far from water. And what makes you think it's a 'he'? It might be a 'she' or an 'it.'"

"It's just a specimen to me. Who cares about the sex, if any, of vermin?"

"Makes a lot of difference to the other vermin," Srt said, unable to resist the chestnut.

Briz fluttered his palps in disgust.

"Remember those gill-breathers on Lugar? Their craft were filled with water. Besides, there is a lake not far from here; we saw it before landing. However, enough gabble. Let's nip the thing with force beams and cut it open. If it needs water, or ice, or anything else, we can supply them fast enough to keep the specimen alive."

The ruum had halted by the North Wall, and as it stood there, the lieutenant pressed a stud. Five pale wands of pulsating energy converged on the musing globe. They saw dust puff from the warty surface. Another deft gesture by the officer, and a glittering circular saw glided out on a thick rocker arm to a point only inches from the ruum.

Seeming mildly surprised by all these maneuvers, the robot began extending an assortment of

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detectors. The captain gave a little buzz of astonishment.

"I could swear," he said wonderingly, "that it pushed one of those rods right through the second beam."

"Hardly likely, sir," Lieutenant Briz assured him calmly. "The torque on these rays is of the order—"

"I know all that, Briz," was the testy reply. "Are you trying to teach me engineering fundamentals. You're hardly out of the egg yet!"

The junior officer subsided into a limp, apologetic silence, his palps dangling.

"Well, well—" the captain ordered irritably. "Start the saw, Lieutenant, and let's get this over with."

There was a shrill, grating hum as the metal teeth came down hard against the ruum's armor. An incredulous silence followed. It had at least two good causes. One, the saw was obviously not cutting, in spite of the fact that it could slice the hardest alloys known to the bee-people at a rate of many inches per minute; and, two, the ruum had casually, almost insolently, rolled free of the five force beams, which had often pinned motionless great scaled beasts from many a planet. There were four simultaneous buzzes of amazement, ranging from thin, blowfly pitch to deep, menacing wasp-notes.

"It—it—" Technician Wrzs babbled. "B—but those rays—they're—". He stopped, mandibles clashing with indignation, for the ruum had produced a whirling saw of its own, a glowing disc that flickered like a flame. Thrusting this tool forward on a flimsy looking rod, the ruum made a single lightning stroke, as if scribing a circle. There was a dull clang as a four-foot, mathematically perfect section of the thick metal wall fell out, leaving a neat, round orifice.

"Quick—it's going to get away!" the captain cried. Stop it, you fools!" Then he snapped: "Sergeant, take the ship up to cruising height. The thing probably can't fly. We'll recapture it out in space where it can't leave." Even as he spoke, a second circular portion fell out, this time almost at their feet, and through the gap came the ruum, heading directly for the captain. In a matter of moments it had penetrated five thick bulkheads to reach them, and the viewer was no longer needed. The robot was now in the control room with the crew. Horrified, the four bees saw a gleaming, syringe-like probe, dripping greenish liquid, rise to working position on the sphere.

"Ray it, quick! the captain cried. "Forget about capturing it!"

Sergeant Srt, fastest of the group, had his handgun out in eight hundreths of a second. The potent bluish beam played square-

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ly on the robot, and instantly the dust and debris on the surface was fiery slag. But the ruum kept coming. Only the milling about of the four bees had delayed its approach to the captain. A heavy explosive bullet from the lieutenant's animal gun jarred the control room with its vicious detonation without slowing the implacable sphere; and when Technician Wrzs, foolishly brave, swung at it with a heavy bar, the ruum merely brushed him aside, still following the one individual it had chosen irrevocably.

Huddled in silent horror, the three great bees saw it close with the captain, who buzzed shrilly in abysmal fear as jointed metal claps gripped his chitinous body. At the last moment his own sting, ordinarily never used except for rare duels with his peers and ritual suicide on failing the Queen, flashed into sight as custom went by the boards under the urge for self-preservation. The keen, amber lance, dripping yellow venom, stabbed hard against the ruum, breaking off short even as the greenish syringe plunged home into the commander's thorax. Instantly the captain fell back, his shimmering wings limp, completely paralyzed. The glitter of his compound eyes faded to a mere gleam, and his palps gave a few pathetic wriggles.

Panic-stricken, the others broke for the hatch, but Briz, suddenly aware of his command responsibility, flung them back.

"Wait!" he panted. "Set the auto-pilot for home. Maybe we can keep out of its way—"

The quick-minded technician saw his point; plunged past Sergeant Srt, and leaped to the controls. It took only a moment to set the computor for their home planet, and maximum acceleration. Then the ruum, through composing its specimen's limbs in a more orderly way, poked a curious rod in their direction. Buzzing, the three fled, and its velocity mounting rapidly, the scout raced for home.

A council of desperation was held immediately, at the farthest end of the ship, since the survivors expected prompt pursuit. There, surrounded by a battery of heavy armament, the three disconsolate bees took stock of their strange predicament. After years of undisputed conquests, they were psychologically unprepared to deal with the invincible sphere.

"This is no place to start a colony," the lieutenant said with grim humor. "It's very lucky we followed the book and avoided those cities. If isolated individuals have such remarkable equipment, just think of their police and armies. We'd have been destroyed in seconds."

"You can't believe that, sir," the sergeant said dully. "We are the highest form of life there is."

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"Tell that to the creature inside the sphere," Briz replied in a bitter voice. "Do you suppose, Wrzs, that this heavy ray-generator, if we dismounted it to turn inward, could blast the thing? After all, it has destroyed other space ships in a flash."

"Frankly, sir, I doubt it. The hand-ray didn't get past the surface dust. There isn't that much difference, basically."

"I'm afraid you're right," the officer agreed gloomily. "But what then?"

Sergeant Srt spoke up, briskly confident. "If we could lure it into the combustion chamber . . ."

"Even if that worked," the lieutenant objected, "we might ruin the ship's drive. We can't risk that so far from home. It's not a matter of our lives, but of warning our Queen about this terrible race." At the mention of the great, immobile, egg-laying bulk, the life and Goddess of their kind, the three bowed their heads.

"It's a pity we didn't get a look at the x-ray pictures," the technician said. Then he added, with more animation: "Sir, have you noticed—it hasn't left the control room. I don't think it's coming after us at all. We could try to make terms."

"Terms!" The officer was outraged. "With the murderer of our noble captain?"

"I think he means, sir," the sergeant explained, "just until we get back. After that—" He paused meaningly.

"Well," Briz admitted, without marked enthusiasm, "it might be worth a try." Then, almost automatically: "Sergeant, take over!"

His subordinate, vainly trying to conceal his chagrin at the dangerous assignment, collected, in reproachful silence, signal lamps, electronic communicators, and even old-fashioned buzz-boxes. Saluting ostentatiously, he listened at the door, opened it with great reluctance, and slipped out. The officer and the technician waited tensely. Finally, when some thirty minutes had passed, the sergeant returned, the strained look gone from his faceted eyes.

"No luck, sir," he reported. "It's just resting there by the—by Captain Zril. It ignored all attempts at communication, but didn't attack me. Just put out a few rods and lenses. I think it's terrified at being out in space. You know, it may have acted the way it did out of sheer panic. Anyhow, we can use the control room now. I saw the x-ray pictures, too."

"What's inside the vehicle?" the lieutenant demanded.

"No use, sir—the shell is so dense that we never got through the surface. Maybe if we try again, with about ten hours' exposure at full power . . ."

"Well, anyway we're headed for home, and the creature is be-

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wildered and helpless so long as we don't scare it into fighting us again." He rubbed the edges of his wings together in satisfaction. "We'll notify them, the minute we're within range, to bring up our heaviest defense weapons. This damned thing inside the ball will regret killing our captain, I promise you. The second we land, it'll be immobilized with really big beams, and then—" He paused, eyes glittering with feral anger. "I shall ask our great Queen to let *me* dissect it."

"Sir, I almost forgot," the sergeant said. "The Captain is still alive."

"Alive!"

"Yes, sir. His palps were trembling, and his eyes had some life spark. He's just paralyzed by that green liquid the sphere injected."

"But if you had the run of the control room, why didn't you carry Captain Zril out so we could treat him?"

"I tried, but it's no use. The minute I came near the captain, the thing became agitated. I didn't dare. It won't let us touch him, that's plain."

"A hostage!" the officer exclaimed. "But then why didn't it communicate? What does it want? I don't understand—" He stopped. It wasn't proper in the Service to display too much ignorance before one's subordinates. Too bad about Zril, but they were helpless. It was more important to get back with this vital information about a—possibly—superior race. Back home, after taking care of the life-form inside the sphere, they'd get the commander to a hospital, where no doubt he could be saved. Whether his official reputation could survive the disgrace was another matter.

But Lieutenant Briz didn't allow for the fanatic loyalty of the technician. That night, when the other two bees were asleep, Wrzs sneaked out, and went to the control room. There, his gallant but ill-advised attempt to rescue the captain set in train a fateful sequence of events.

It was the ruum's business to collect one typical specimen within the weight limits set by the long-dead captain of the *Ilkor*. There was no reason for the efficient robot to bother the remaining bees. Nor had it any setting requiring it to return to the earth. So far as it knew, it was still on the ground, and within its assigned radius of operations, since only its own rolling motion registered as distance travelled on the intricate computers inside.

One other thing was within its capabilities, and it amounted to a solemn duty: a ruum was built to protect its specimens from injury and molestation. For millions of years it had successfully guarded its collection in the Rockies. The green liquid made the paralyzed bodies, still alive, unpalatable to

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other predators, and many a grizzly had died while attempting an easy meal in the ruum's butcher shop.

It follows that when Technician Wrzs crept into the control room and foolishly tried to drag out Captain Zril, the great sphere rolled into prompt action, driving the bee away with an overwhelming display of force. Mercifully indifferent, aside from its mission, the robot did not kill the intruder, but—and this is significant—it made the control room off-limits from then on.

The dutiful Wrzs confessed his mistake to the Lieutenant, who promised him a speedy court martial at home, but the damage was done. A few attempts soon convinced the bees that it was no longer possible to reach the controls; the ruum harried them out in seconds. There was no solution; the robot held the nerve-center of the ship, and the scout, at an acceleration almost beyond conception, was hurtling with perfect accuracy for the main spaceport of their home planet.

During that terrible twenty-four-hour approach period, they made repeated attempts to reach the controls, only to be met at the door by the vigilant ruum, more concerned than ever for its first new specimen in many years.

When a mere six hours from home, the three bees realized that nothing could save them and their vital information, and feeling utterly disgraced in having failed the Queen, they made a final invocation, and loudly buzzing Her praises, stung themselves honorably to death.

At the last moment the emergency controls managed to stop any further acceleration, but even so, when the ship plunged into the space port, too fast for the most sensitive detectors to flash any warning, it destroyed that installation utterly, leaving a glowing crater five miles across.

There was nothing alive around to see a spherical object roll casually out of the seething pit, flicker a few instruments towards the Royal Capitol, just visible over the horizon, and move at a relentless five miles an hour in the direction of the Imperial Palace.

After a million years of activity, even the perfect robot must show some signs of wear; and a minor defect may occur even with the product of a peerless technology. It was most unfortunate for the bee-people and their plans of conquest that in the almost inconceivable force of the ship's impact, the ruum's basic setting was jarred from a mere 160 pounds to its maximum of 3500.

For the Queen Bee, the Source of All, and Only Mother of the Race, busily laying eggs in the Imperial Palace twenty miles away, weighed exactly 3500 pounds.

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In the course of this revealing article, The Good Doctor touches on a Biblical inaccuracy, why wheels turn smoothly in Tennessee, and a fantastic fifteen-year exercise in futility. . . .

A PIECE OF PI

by Isaac Asimov

IN MY ARTICLE, "THOSE CRAZY IDEAS" (F&SF, JANUARY, 1960), I casually threw in a footnote to the effect that $e^{\pi i} = -1$. Behold, a good proportion of the comment which I received thereafter, dealt not with the article itself but with that footnote (one reader, more in sorrow than in anger, proved the equality, which I had said, sighing, was not obvious to me).

My conclusion is that some readers are interested in mathematics. Since I am, too (albeit I am not really a mathematician, or anything else) the impulse is irresistible to pick up the subject of "pi" and talk about it for a while. (To soothe The Kindly Editor and the noble printer, I shall refer to the quantity as "pi" exclusively, henceforward, and eschew the Greek-letter symbol.)

In the first place, what is "pi" and why is it called "pi?" Well, "pi" is the numerical value expressing the ratio of the length of the perimeter of a circle to the length of its diameter. "Perimeter" is from the Greek "perimetron" meaning "the measurement around" and "diameter" from the Greek "diametron" meaning "the measurement through." For some obscure reason, while it is customary to use perimeter in the case of polygons, it is also customary to switch to the Latin "circumference" in speaking of circles. This is all right, I suppose (I am no purist) but it obscures the reason for the symbol "pi."

Back about 1600, the English mathematician, William Oughtred,

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in discussing the ratio of a circle's perimeter to its diameter, used the Greek letter "pi" to symbolize the perimeter and the Greek letter "delta" to symbolize the diameter. They were the first letters, respectively, of "perimetron" and "diametron."

Now mathematicians often simplify matters by setting values equal to unity whenever they can. For instance, they might talk of a circle of unit diameter. In such a circle, the length of the perimeter is numerically equal to the ratio of perimeter to diameter. (This is obvious to some of you, I suppose, and the rest of you can take my word for it.) Since in a circle of unit diameter, the perimeter equals the ratio, the ratio can be symbolized by the symbol of the perimeter, "pi." And since circles of unit diameter are very frequently dealt with, the habit becomes quickly ingrained.

The first top-flight man to use the Greek letter "pi" as the symbol for the ratio of the length of a circle's perimeter to the length of its diameter was the Swiss mathematician, Leonhard Euler, in 1737, and what was good enough for Euler was good enough for everyone else.

Now I can go back to calling the distance around a circle the "circumference."

But what *is* the ratio of the circumference of a circle to its diameter in actual numbers?

This apparently is a question that concerned the ancients even long before pure mathematics was invented. In any kind of construction past the hen-coop stage you must calculate in advance all sorts of measurements, if you are not perpetually to be calling out to some underling, "You idiot, these beams are all half-a-foot too short." In order to make the measurements, the universe being what it is, you are forever having to use the value of "pi" in multiplications. Even when you're not dealing with circles, but only with angles (and you can't avoid angles) you will bump into "pi."

Presumably, the first empirical calculators who realized that the ratio was important, determined the ratio by drawing a circle and actually measuring the length of the diameter and the circumference. Of course, measuring the length of the circumference is a tricky problem that can't be handled by the usual wooden foot-rule, which is far too inflexible for the purpose.

What the Pyramid-builders and their predecessors probably did was to lay a linen cord along the circumference very carefully, make a little mark at the point where the circumference was completed, then straighten the line and measure it with the equivalent of a wooden foot-rule. (Modern theoretical mathematicians frown at this

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and make haughty remarks like: "But you are making the unwarranted assumption that the line is the same length when it is straight as when it was curved." I imagine the honest workman organizing the construction of the local temple, faced with such an objection, would have solved matters by throwing the objector into the Nile.)

Anyway, by drawing circles of different size and making enough measurements, it undoubtedly dawned upon architects and artisans, very early in the game, that the ratio was always the same in all circles. In other words, if one circle had a diameter twice as long or 1⅝ as long as the diameter of a second, it would also have a circumference twice as long or 1⅝ as long. The problem boiled down, then, not to finding the ratio of the particular circle you were interested in using, but a universal ratio that would hold for all circles for all time. Once someone had the value of "pi" in his head, he would never have to determine the ratio again for any circle.

As to the actual value of the ratio, as determined by measurement, that depended, in ancient times, on the care taken by the person making the measurement and on the value he placed on accuracy in the abstract. The ancient Hebrews, for instance, were not much in the way of construction engineers and when the time came for them to build their one important building (Solomon's temple) they had to call in a Phoenician architect.

It is to be expected, then, that the Hebrews in describing the temple would use round figures only, seeing no point in stupid and troublesome fractions, and refusing to be bothered with such petty and niggling matters when the House of God was in question.

Thus, in Chapter 4 of 2 Chronicles, they describe a "molten sea" which was included in the temple and which was, presumably, some sort of container in circular form. The beginning of the description is in the second verse of that chapter and reads: "Also he made a molten sea of ten cubits from brim to brim, round in compass, and five cubits the height thereof; and a line of thirty cubits did compass it round about."

The Hebrews, you see, did not realize that in giving the diameter of a circle (as ten cubits or as anything else) they automatically gave the circumference as well. They felt it necessary to specify the circumference as 30 cubits and in so doing revealed the fact that they considered "pi" to be equal to exactly 3.

There is always the danger that some individuals, too wedded to the literal words of the Bible, may consider 3 to be the divinely ordained value of "pi" in consequence. I wonder if this may not have

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been the motive of the simple soul in the Tennessee legislature who, some years back, introduced a bill which would have made "pi" legally equal to 3 inside the bounds of Tennessee. Fortunately, the bill did not pass, or all Tennessee wheels (which would of course have respected the laws of the state's august legislator) would have turned hexagonal.

In any case, those ancients who were architecturally sophisticated knew well, from their measurements, that the value of "pi" was distinctly more than 3. The best value they had was 22/7 (or $3\frac{1}{7}$, if you prefer) which really isn't bad and is still used to this day for quick approximations.

Decimally, 22/7 is equal, roughly, to 3.142857 . . . while "pi" is equal, roughly, to 3.141592. . . . Thus, 22/7 is high by only 0.04 percent or 1 part in 2500. Good enough for most rule-of-thumb purposes.

Then along came the Greeks and developed a system of geometry that would have none of this vile lay-down-a-string-and-measure-it-with-a-ruler business. That, obviously, gave values that were only as good as the ruler and the string and the human eye, all of which were dreadfully imperfect. Instead, the Greeks went about deducing what the value of "pi" must be once the perfect lines and curves of the ideal plane geometry they had invented were taken properly into account.

Archimedes of Syracuse, for instance, used the "method of exhaustion" (a forerunner of integral calculus, which Archimedes might have invented 2,000 years before Newton if some kind benefactor of later centuries had only sent him the Arabic numerals via a time machine) to calculate "pi."

To get the idea, imagine an equilateral triangle with its vertices on the circumference of a circle of unit diameter. Ordinary geometry suffices to calculate exactly the perimeter of that triangle. It comes out to $3\sqrt{3/2}$, if you are curious, or 2.598076. . . . This perimeter has to be less than that of the circle (that is, than the value of "pi") again by elementary geometrical reasoning.

Next, imagine the arcs between the vertices of the triangle divided in two so that a regular hexagon (a six-sided figure) can be inscribed in the circle. Its perimeter can be determined also (it is exactly 3) and this can be shown to be larger than that of the triangle but still less than that of the circle. By proceeding to do this over and over again, a regular polygon with 12, 24, 48, etc., sides can be inscribed.

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The space between the polygon and the boundary of the circle is steadily decreased or "exhausted" and the polygon approaches as close to the circle as you wish, though it never really reaches it. You can do the same with a series of equilateral polygons that circumscribe the circle (that lie outside it, that is, with their sides tangent to the circle) and get a series of decreasing values that approach the circumference of the circle.

In essence, Archimedes trapped the circumference between a series of numbers that approached "pi" from below, and another that approached it from above. In this way, "pi" could be determined with any degree of exactness, provided you were patient enough to bear the tedium of working with polygons of large numbers of sides.

Archimedes found the time and patience to work with polygons of 96 sides and was able to show that the value of "pi" was a little below 22/7 and a little above the slightly smaller fraction, 223/71.

Now the average of these two fractions is 3123/994 and the decimal equivalent of that is 3.141851. . . . This is more than the true value of "pi" by only 0.0082 percent or 1 part in 12,500.

Nothing better than this was obtained, in Europe, at least, until the 16th Century. It was then that the fraction 355/113 was first used as an approximation of "pi." This is really the best approximation of "pi" that can be expressed as a reasonably simple fraction. The decimal value of 355/113 is 3.14159292 . . . , while the true value of "pi" is 3.14159265. . . . You can see from that that 355/113 is higher than the true value by only 0.000008 percent, or by one part in 12,500,000.

Just to give you an idea of how good an approximation 355/113 is, let's suppose that the earth were a perfect sphere with a diameter of exactly 8,000 miles. We could then calculate the length of the equator by multiplying 8,000 by "pi." Using the approximation 355/113 for "pi," the answer comes out 25,132.7433 . . . miles. The true value of "pi" would give the answer 25,132.7412 . . . miles. The difference would come to about 11 feet. A difference of 11 feet in calculating the circumference of the earth might well be reckoned as negligible. Even the artificial satellites that have brought our geography to new heights of precision haven't supplied us with measurements within that range of accuracy.

It follows then that for anyone but mathematicians, 355/113 is as close to "pi" as it is necessary to get under any but the most unusual circumstances. And yet to mathematicians, a miss, however close, is as bad as a megaparsec.

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The key step toward the true value was taken by Francois Vieta, a French mathematician of the 16th Century. He is considered the father of algebra because, among other things, he introduced the use of letter symbols for unknowns, the famous *x*'s and *y*'s, which most of us have had to, at one time or another in our lives, face with trepidation and uncertainty.

Vieta performed the algebraic equivalent of Archimedes' geometric method of exhaustion. That is, instead of setting up an infinite series of polygons that came closer and closer to a circle; he deduced an infinite series of fractions which could be evaluated to give a figure for "pi." The greater the number of terms used in the evaluation, the closer you were to the true value of "pi."

I can't give you Vieta's series here because it involves square roots and the square roots of square roots and the square roots of square roots of square roots, and if I wrote it, I would create consternation in the offices of The Kindly Editor to whose harassment I would not willingly contribute. Fortunately, other mathematicians derived other series of terms (always an infinite series) for the evaluation of "pi," and some of them are easier to express in terms of unspecialized printers' fonts.

For instance, in 1673, the German mathematician, Gottfried Wilhelm von Leibniz derived a series which can be expressed as follows:

pi=4/1—4/3+4/5—4/7+4/9—4/11+4/13—4/15 . . .

Being a naive non-mathematician myself, with virtually no mathematical insight worth mentioning, I thought, when I first decided to do this article, that I would use the Leibniz series to dash off a short calculation and show you how it would give "pi" easily to a dozen places or so. However, shortly after beginning, I quit.

You may scorn my lack of perseverance but any of you are welcome to evaluate the Leibniz series just as far as it is written above, to $\frac{4}{15}$, that is. You can even drop me a postcard and tell me the result. If, when you finish, you are disappointed to find that your answer isn't as close to "pi" as the value of 355/113, don't give up. Just add more terms. Add $\frac{4}{17}$ to your answer, then subtract $\frac{4}{19}$, then add $\frac{4}{21}$ and subtract $\frac{4}{23}$ and so on. You can go on as long as you want to, and if any of you find out how many terms it takes to improve on 355/113, drop me a line and tell me that, too.

Of course, all this may disappoint you. To be sure, the endless series *is* a mathematical representation of the true and exact value of "pi." To a mathematician, it is as valid a way as any to express that value. But if you want it in the form of an actual number, how

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does it help you? It isn't even practical to sum up a couple of dozen terms for anyone who wants to go about the ordinary business of living; how, then, can it be possible to sum up an infinite number?

Ah, but mathematicians do not give up on the sum of a series just because the number of terms in it is unending. For instance, the series:

$$1/2+1/4+1/8+1/16+1/32+1/64 \ldots$$

can be summed up, using successively more and more terms. If you do this, you will find that the more terms you use, the closer you get to 1, and you can express this in shorthand form by saying that the sum of that infinite number of terms is merely 1 after all.

There is a formula, in fact, that can be used to determine the sum of any decreasing geometric progression, of which the above is an example.

Thus, the series:

$$3/10+3/100+3/1000+3/10000+3/100000 \ldots$$

adds up, in all its splendidly infinite numbers to a mere ⅓, and the series:

$$1/2+1/20+1/200+1/2000+1/20000 \ldots$$

adds up to ⅝.

To be sure, the series worked out for the evaluation of "pi" are none of them decreasing geometric progressions, and so the formula cannot be used to evaluate the sum. In fact, no formula has ever been found to evaluate the sum of the Leibniz series or any of the others. Nevertheless, there seemed no reason at first to suppose that there might not be some way of finding a decreasing geometric progression that would evaluate "pi." If so, "pi" would then be expressible as a fraction. A fraction is actually the ratio of two numbers and anything expressible as a fraction, or ratio, is a "rational number." The hope, then, was that "pi" might be a rational number.

One way of proving that a quantity is a rational number is to work out its value decimally as far as you can (by adding up more and more terms of an infinite series, for instance) and then showing the result to be a "repeating decimal"; that is, a decimal in which digits or some group of digits repeat themselves endlessly.

For instance, the decimal value of ⅓ is 0.33333333333 . . . , while that of ⅐ is 0.142857 142857 142857 . . . , and so on endlessly. Even a fraction such as ⅛ which seems to "come out

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even" is really a repeating decimal if you count zeroes, since its decimal equivalent is 0.125000000000. . . . It can be proven mathematically that every fraction, however complicated, can be expressed as a decimal which sooner or later becomes a repeating one. Conversely, any decimal which ends by becoming a repeating one, however involved the repetitive cycle, can be expressed as an exact fraction.

Take any repeating decimal at random, say 0.37373737373737 . . . . First, you can make a decreasing geometrical progression out of it by writing it as:

37/100+37/10000+37/1000000+37/100000000 . . .

and you can then use the formula to work out its sum which comes out to 37/99. (Work out the decimal equivalent of that fraction and see what you get.)

Or suppose, you have a decimal which starts out non-repetitively and then becomes repetitive, such as 15.21655555555555. . . . This can be written as:

15+216/1000+5/10000+5/100000+5/1000000 . . .

From 5/10000 on, we have a decreasing geometric progression and its sum works out to be 5/9000. So the series becomes a finite one made out of exactly three terms and no more, and can be summed easily:

15+216/1000+5/90000=136949/9000

If you wish, work out the decimal equivalent of 136949/9000 and see what you get.

Well, then, if the decimal equivalent of "pi" were worked out for a number of decimal places and some repetition were discovered in it, however slight and however complicated, provided it could be shown to go on endlessly, a new series could be written to express its exact value. This new series would conclude with a decreasing geometric progression which could be summed. There would then be a finite series and the true value of "pi" could be expressed not as a series but as an actual number.

Mathematicians threw themselves into the pursuit. In 1593, Vieta himself used his own series to calculate "pi" to 17 decimal places. I can, alas, only lay my hands on a 16-decimal value in my own library, but here it is, if you want to stare at it: 3.1415926536898732. . . . As you see, there are no apparent repetitions of any kind.

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Then in 1615, the German mathematician Ludolf von Ceulen used an infinite series to calculate "pi" to 35 places. He found no signs of repetitiveness, either. However, this was so impressive a feat for his time that he won a kind of fame, for "pi" is sometimes called "Ludolf's number" in consequence, at least in German textbooks.

And then in 1717, the English mathematician Abraham Sharp went Ludolf several better by finding "pi" to 72 decimal places. Still no signs of repeating.

But shortly thereafter, the game was spoiled.

To prove a quantity is rational, you have to present the fraction to which it is equivalent and display it. To prove it is irrational, however, you need not necessarily work out a single decimal place. What you must do is to *suppose* that the quantity can be expressed by a fraction, p/q and then demonstrate that this involves a contradiction, such as that p must at the same time be even and odd. This would prove that no fraction could express the quantity, which would therefore be irrational.

Exactly this sort of proof was developed by the ancient Greeks to show that the square root of 2 was an irrational number (the first irrational ever discovered). The Pythagoreans were supposed to have been the first to discover this and to have been so appalled at finding that there could be quantities that could not be expressed by any fraction, however complicated, that they swore themselves to secrecy and provided a death penalty for snitching. But like all scientific secrets, from irrationals to atom bombs, the information leaked out anyway.

Well, in the 18th Century, it was finally proved that "pi" was irrational. (Exactly who proved it, how and when, I have not been able to trace down. If a reader knows, I wish he'd tell me.) Therefore, no pattern at all was to be expected, no matter how slight and no matter how many decimal places were worked out. The true value can *only* be expressed as an infinite series.

Alas!

But shed no tears. Once "pi" was proved irrational, mathematicians were satisfied. The problem was over. And as for the application of "pi" to physical calculations, that problem was over and done with, too. You may think that sometimes in very delicate calculations, it might be necessary to know "pi" to a few dozen or even to a few hundred places, but not so! The delicacy of scientific measurements is wonderful these days, but still there are few that approach, say, 1

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part in a billion and for anything that accurate which involves the use of "pi," 9 or 10 decimal places would be ample.

For example, suppose you drew a circle, ten billion miles across, with the Sun at the center, for the purpose of enclosing the entire Solar system, and suppose you wanted to calculate the length of the circumference of this circle (which would come to over 31 billion miles) by using 355/113 as the approximate value of "pi." You would be off by less than 3,000 miles.

But suppose you were so precise an individual that you found an error of 3,000 miles in 31,000,000,000 to be insupportable. You might then use Ludolf's value of "pi" to 35 places. You would then be off by a distance that would be equivalent to a millionth of the diameter of a proton.

Or let's take a *big* circle, say the circumference of the known universe. The new 600-foot radio telescope being built in West Virginia will, it is hoped, receive signals from a distance as great as 40,000-000,000 light years. A circle about a universe with such a raidus would have a length of, roughly, 150,000,000,000,000,000,000,000 (150 sextillion) miles. If the length of this circumference were calculated by Ludolf's value of "pi" to 35 places, it would be off by less than a millionth of an inch.

What can one say then about Sharp's value of "pi" to 72 places?

Obviously, then, the value of "pi," as known by the time its irrationality was proved, was already far beyond the accuracy that could conceivably be demanded by science, now or in the future.

And yet with the value of "pi" no longer needed for mathematicians or for scientists, past what had already been determined, people nevertheless continued their calculations through the first half of the 19th Century.

A fellow called George Vega got "pi" to 140 places, another called Zacharias Dase did it to 200 places, and someone called Recher did it to 500 places.

Finally, in 1873, William Shanks reported the value of "pi" to 707 places and that, until 1949, was the record, and small wonder. It took Shanks fifteen years to make the calculation and, for what it's worth, no signs of any repetitiveness showed up.

We can wonder about what would cause a man to spend fifteen years on a task that could serve no purpose. Perhaps it is the same mental attitude that will make a man sit on a flagpole to "break a record." Or perhaps Shanks saw this as his one road to fame.

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If so, he made it. Histories of mathematics, in among their descriptions of the work of men like Archimedes, Fermat, Newton, Euler and Gauss, will also find room for a line to the effect that William Shanks in the years preceding 1873 calculated "pi" to 707 decimal places. So perhaps he felt that his life had not been wasted.

But alas, for human vanity—

In 1949, the giant computers were coming into their own, and occasionally, the young fellows at the controls, full of fun and life and beer could find time to play with them.

So, on one occasion, they pumped one of the unending series into the machine called ENIAC and had it calculate the value of "pi." They kept it at the task for 70 hours, and at the end of that time, they had the value of "pi" (shades of Shanks!) to 2,035 places.

And to top it all off for poor Shanks and his fifteen wasted years, an error was found in the five hundred umpty-umpth digit of Shanks' value, so that all his digits after that, well over a hundred, were *wrong!*

And of course, in case you're wondering, and you shouldn't, ENIAC's value showed no signs of any repetitiveness either.

P. S. As the title implies, this is only a piece of pi. There's more to the story. In fact, what's still left to tell transcends in interest even that which has preceded, and this is a pun you will appreciate only when I work up the nerve to write the second part.

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WOCKYJABBER

'Twas finite and the polar cusp
Orthogonal to the secant lay.
The semi-tacnode operates on
The Gudermanian of A.

"Beware the Integral, my son,
With shape of non-symmetric bell.
Beware old Van der Pol, and shun
The curious vector del."

He took his program in his hand.
Long hours the real root he sought.
Then rested by the memory drums
And sat awhile in thought.

And as in tedious thought he sat,
The Integral, without a name,
Rose from a skewed, conformal map,
Diverging as it came!

Pi-e, Pi-e, and x, y, z,
His digital went clicky-clack.
He found the norm in series form
And brought the work sheets back.

"Oh hast thou solved the Integral?
Here's thy degree, my brainish boy!"
He threw his punch cards in the air
And clapped his hands with joy.

'Twas finite and the polar cusp
Orthogonal to the secant lay.
The semi-tacnode operates on
The Gudermanian of A.

—Hilbert Schenck, Jr.

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BOOKS

Iä! Yog-Sothoth! Yah, Yah, Yah!

by Damon Knight

NIGHT OF THE BIG HEAT, by John Lymington (Dutton, $2.95), is still another product of well-meant auctorial ignorance and inveterate publishing snobbery. Like David Duncan (in DARK DOMINION, BEYOND EDEN, and OCCAM'S RAZOR, Ballantine '54, '55, '57), Jack Finney (THE BODY SNATCHERS, Dell '55) and other intruders, Lymington is a skilled and persuasive mundane writer; his principal characters, Richard Callum, his wife Frankie, the country people who hang out in their inn, the White Lion, and a sexpot-secretary, Patrica Wells, are agreeably if sketchily drawn, and if there were nothing more to the novel, their casual encounters, sexual and otherwise, would make passable hammock reading. The science fiction element, such as it is —a heat-ray attack on the northern hemisphere, followed by a matter-transmitter invasion of monsters—is kept carefully and completely in the background from beginning to end. It begins as addle-pated speculation: "'Evidence has been known over centuries of thought waves actually causing the materialization of persons at a point thousands of miles from where they are known to be. [. . .] Telepathy is commonly accepted, yet radio is merely the mechanical-electrical form of it.'"

Then we get a series of menacing shapes and sounds in the night: "'It is somewhere in the darkness below me on the bank. If I could see I would know what form of creature it is, whether it had normal sight, hearing and responses. Whether it is savage or not . . . But I can see nothing at all . . .'"

And finally the fields catch fire, the monsters are all burnt up,

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and so we never find out anything more about them. The End.

This is where both the snobbery and the ignorance come in.

The snobbery: That the quality of a science fiction novel is inversely proportional to the quantity of science fiction in it. (We are surrounded by book editors who choose s.f. novels on just this basis, though they would die rather than admit it.)

The ignorance: That science fiction is simply a gadgeted-up version of the classic story of supernatural mystery.

I think it was the late Fletcher Pratt, in the introduction to his anthology WORLD OF WONDER (Twayne, '52), who spoke of a play of Dunsany's in which the awesome voices of gods are heard offstage—an impressive effect, until the gods come stumbling on, and the audience sees they are only men.

At any rate, whoever I am cribbing this story from (the Pratt book is buried where I can't get at it), it illustrates a principle that guided all the classic weird-story writers: that "mystery" goes out when the lights go on. Masters of the macabre like H. P. Lovecraft tried so hard (and so successfully) to avoid actually introducing any of their eldritch horrors, that the most dreadful thing about these stories is their tendium.

This is the point: Dunsany would have done better to keep his gods offstage, yes, simply because he had none of the genuine article to show. But in fiction, a really imaginative fantasy writer can bring his monsters into full view, and make them terrifying: the highly explicit horrors of such modern fantasies as CONJURE WIFE, by Fritz Leiber, "It," by Theodore Sturgeon, and "Hell Hath Fury," by Cleve Cartmill (all from the lamented *Unknown*), are more frightening than all the "unnameable," "indescribable," and "unthinkable" hobgoblins of the Lovecraft school.

"Mystery," as I've said elsewhere, asks the questions; science fiction—and modern fantasy too—gives the answers.

It's an exploded myth that dreadful and wonderful things cannot be brought into the light without destroying their awe. The writer who adopts this pose nowadays is making a confession of imaginative bankruptcy.

And the publisher who seizes upon this stuff, in the naive belief that he's doing the s.f. field a favor, is a museum piece like Cthulhu "Ia! Yog-Sothoth!" and the shuggoth.

THE GLORY THAT WAS, by L. Sprague de Camp (Avalon, $2.95), is based on a pleasant conceit with which de Camp has amused himself before (in THE CARNELIAN CUBE, Gnome '48): using historical reconstructions,

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hypnosis, and great gobs of money, an eccentric archaeologist recreates a city of the past—in this case, Periclean Athens—and in effect runs history over, either to see how it comes out, or to make it come out differently.

Into the pseudo-Athens come Wiyem Flin and Knut Bulnes, looking for Flin's kidnapped wife. The plot that now unreels is predictably and satisfyingly full of footpads, rascally innkeepers, intrigue, and the thorny parts of Greek grammar and folkways. The book is as easy and pleasant to read as de Camp's best work; his scholarly background is everywhere evident but nowhere intrusive. And yet something is missing; compared with DIVIDE AND RULE, LEST DARKNESS FALL and THE INCOMPLETE ENCHANTER, it seems somehow diffuse and incomplete. For what it's worth, I offer a possible explanation. The trouble is in the hero.

Knut Bulnes seems at first blush a typical de Camp protagonist: i.e., he is a young unmarried male, good at armed combat, girl-rescuing and other heroic business, but without that stupefying all-around virtue that makes you want to kick a classical hero. He is humanly imperfect, somewhat cynical and selfish, and may run like a rabbit if the situation seems to call for it. All this is refreshing to say the least, and Bulnes ought to be as attractive as Harold Shea or Howard Van Slyck. But he isn't.

My notion is that sometime in the middle '40s, without the author's awareness and surely without his intention, the de Camp hero became a victim of overspecialization. As the dinosaurs are said to have gone out of business when they got too big, and the saber-tooth when its fangs got too long, de Camp's hero grew too cynical, too selfish, too prosaically human to be admirable at all. In earlier stories, Shea's vanity, Van Slyck's selfishness and the like were little jabs at the reader to keep him awake, to make him sit up in surprise and say to himself, "Why, this guy's really human!" . . . after which he could relax again and enjoy the swordplay. But Van Slyck, the spoiled young knight of DIVIDE AND RULE, was essentially an honest, idealistic and likeable man; the reader cared intensely what happened to him. Bulnes, although he goes through all the motions, is simply—and sadly—not a man you can give a damn about.

THE EATER OF DARKNESS, by Robert M. Coates (Putnam, $1.15), first published by Contact Editions in Paris in 1926, is billed as "a tremendous mystery story with science-fiction overtones" and "the first surrealist novel in English." The book is, in fact, an exuberant, formless and

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irreverent prank novel, part parody, part automatic writing, and part just fun-on-the-typewriter. Although there are some delightful bits in it, it is not a mystery, not science fiction, and the literary importance which the publishers ascribe to it seems to me entirely imaginary.

Briefly Noted

For the year's funniest title so far I nominate IS THERE INTELLIGENT LIFE ON EARTH?, "a story in words and pictures" by cartoonist Alan Dunn. The story is pretty funny, too, in a dry *New Yorker*-ish way; the drawings look like the work of a highly talented artist in a hell of a hurry.

Last year's funniest cover blurb is that which appears on PAGAN PASSIONS, "a Galaxy Prize Selection" (Beacon, 35¢). I quote it below in full:

Randall Garrett and Larry M. Harris

Forced to make love to beautiful women!

This is adult Science Fiction at its best.

Also left over from last year is a non-fiction work, PHILOSOPHY AND THE PHYSICISTS, by L. Susan Stebbing (Dover, $1.65), which was not eligible for the best-of-the-year list, but certainly deserves comment. Mrs. Stebbing, late Professor of Philosophy at the University of London, sets out in this work to examine the underlying assumptions of such science-and-philosophy vulgarizers as Eddington and Jeans—a laudable project, to be sure; but the author makes a travesty of it by showing on every page that she has solemnly and ludicrously misread everything the two gentlemen wrote.

Macmillan has reissued THE SCREWTAPE LETTERS, by C. S. Lewis, in a 75¢ paperback edition. If by any chance you've never read this brilliant brew of Christian apology and supernatural fantasy (written in the form of letters from an elderly demon to his nephew), get it.

In Passing

My collection of essays on science fiction, IN SEARCH OF WONDER, which was out of print and so scarce that I couldn't find a copy for a friend, has just been reissued—$4, from Advent: Publishers, Box 9228, Chicago 90, Ill.

THE BEST FROM FANTASY AND SCIENCE FICTION, Ninth Series, the first to be edited by Robert P. Mills (Doubleday, $3.95), contains sixteen stories from this magazine, including "Flowers For Algernon," by Daniel Keyes, R. M. McKenna's "Casey Agonistes," "'All You Zombies—'" by Robert A. Heinlein, and Theodore Sturgeon's "The Man Who Lost the Sea."

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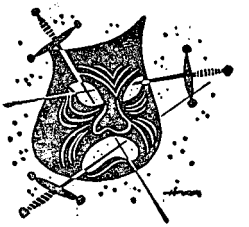

The "Red Death" had long devastated the country. No pestilence had ever been so fatal, or so hideous. Blood was its Avatar and its seal—the redness and the horror of blood.

Recognize this? It's the chilling opening of Edgar Allan Poe's classic fantasy, "The Mask of the Red Death." Ten years ago this short story was reproduced in a limited edition to commemorate two events—the 100th Anniversary of the author's death and the first issue of *The Magazine of Fantasy and Science Fiction.* We are offering this collector's item (a five page reproduction from *Graham's Lady's and Gentleman's Magazine*, 1842) FREE with each two year subscription, new or renewal, at the special price of $6.98. This *is* a limited edition, so don't delay. Fill out the coupon below, and you will be sure of receiving a copy.

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Ballad of the Red Giants

When we observe a star with a greatly distended bulk, we know that this star has had sufficient time since it was born to consume most of its initial supply of hydrogen. In small stars, such as the Sun, that have not yet lived long . . . there can be no great degree of swelling. Even so, it seems there has already been a slight expansion of the Sun.

—*Fred Hoyle,* THE NATURE OF THE UNIVERSE

Betelgeuse, Betelgeuse, what do you do,
Far in the star-black, out-back sky,
Blundering thunderous, bloated and floating,
Swollen and hopeless, older than oldness,
Rolling and roaring, red as a yawn,
Fattening, battening on all your planets
Till all your planets are gobbled and gone—
Betelgeuse, Betelgeuse, what do you do?

I burn.

Big Ras algethi, bigger than Betelgeuse,
Big Ras algethi, red as a railroad
Lantern and gassier, bulging and belching,
Heaving through heaven, hiccuping helium,
Bigger than Betelgeuse, dying of size,
Big Ras algethi, what do you do?

I burn.

Great E Aurigae, monstrous, impossible,
Bigger than both of them, Betelgeuse, Ras,
Dying for hydrogen, rotten with dropsy,
Bleary and bloodshot, pumped up with nothingness,
Doomed and distended, ended and spent—
Giant E Aurigae, what do you do?

I burn.

Little Sol, little Sol, what do you do,
Yellow as Cheddar, bright as a child,
Steady, dependable, smiling and mild,
Rain raiser, grain raiser, seasonable,
Night sleeper, time keeper, reasonable,
Little Sol, little Sol, what do you do?

I burn.

—JOSEPH HANSEN

© *1969 by Joseph Hansen; originally appeared in the Atlantic Monthly*

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A tale about a man marooned on Mars, and the extraordinary ecology which, despite its occasionally unpleasant aspects, gives him a chance to go on living. While not a story for those who are squeamish about biological details, it does present intriguing speculation about possible extra-terrestrial life forms . . . together with adventure and an extraordinary love affair.

OPEN TO ME, MY SISTER

by Philip José Farmer

THE SIXTH NIGHT ON MARS, Lane wept. He sobbed loudly while tears ran down his cheeks. He smacked his right fist into the palm of his left hand until the flesh hurt. He howled with the anguish of loneliness. He swore the most obscene and blasphemous oaths he knew, and he knew many after ten years in the UN's Space Arm.

After a while, he stopped weeping. He dried his eyes, downed a shot of scotch, and felt much better.

He wasn't ashamed because he had bawled like a woman. After all, there had been a Man who had not been ashamed to weep. Moreover, one of the reasons he had been chosen to be in the first party to land on Mars was this very ability to cry. No one could call him weakling or coward. A man with little basic courage could never have passed through the battery of tests and testers in the space school on Earth, let alone have made the many thrusts to the Moon. But, though male and masculine, he had a woman's safety valve. He could dissolve in tears the grinding stones of tension within; he was the reed that bent before the wind, not the oak that toppled, roots and all.

Now, the weight and ache in his breast gone, feeling almost cheerful, he made his scheduled report over the transceiver to the circum-Martian vessel five hundred and eight miles overhead. Then he did what men must do any place in the universe. Afterwards, he lay down in the bunk and opened the one personal book he had been allowed to bring along, an anthology of the world's greatest poetry.

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He read here and there, running, pausing for only a line or two, then completing in his head the thousand-times murmured lines. Here and there he read, like a bee tasting the best of the nectar. . . .

It is the voice of my beloved that knocketh, saying,
Open to me, my sister, my love, my dove, my undefiled . . .

We have a little sister,
And she hath no breasts;
What shall we do for our sister
In the day when she shall be spoken for? . . .

Yeah, though I walk through the valley of the shadow of death,
I will fear no evil: for thou art with me . . . .

Come live with me and by my love
And we will all the pleasures prove . . .

It lies not in our power to love or hate
For will in us is over-ruled by fate . . .

With thee conversing, I forget all time,
All seasons, and their change, all please alike . . .

He read on about love and man and woman until he had almost forgotten his troubles. His lids drooped; the book fell from his hand. But he roused himself, climbed out of the bunk, got down on his knees and prayed that he be forgiven and understood for his blasphemy and despair. And he prayed that his four lost comrades be found safe and sound. Then he climbed back into the bunk and fell asleep.

At dawn he woke reluctantly to the alarm clock's ringing. Nevertheless, he did not fall back into sleep but rose, turned on the transceiver, filled a cup with water and instant, and dropped a heat pill in it. Just as he finished the coffee, he heard Captain Stroyansky's voice from the 'ceiver. Stroyansky spoke with barely a trace of Slavic accent.

"Cardigan Lane? You awake?"

"More or less. How are you?"

"If we weren't worried about all of you down there, we'd be fine."

"I know. Well, what are the captain's orders?"

"There is only one thing to do, Lane. You must go look for the others. Otherwise, you cannot get back up to us. It takes at least two more men to pilot the rocket."

"Theoretically, one man can pilot the beast," replied Lane. "But it's uncertain. However, that doesn't matter. I'm leaving at once to look for the others. I'd do that even if you ordered otherwise."

Stroyansky chuckled. Then, he

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barked like a seal, "The success of the expedition is more important than the fate of four men. But if I were in your shoes—and I'm glad I'm not—I would do the same. So good luck, Lane."

"Thanks," said Lane. "I'll need more than luck. I'll also need God's help. I suppose He's here, even if the place does look God-forsaken."

He stared appraisingly through the transparent double plastic walls of the dome.

"The wind's blowing about twenty-five miles an hour," he said. "The dust is covering the tractor tracks. I have to get going before they're covered up entirely. My supplies are all packed; I've enough food, air, and water to last me six days. It makes a big package; the air tanks and the sleeping tent bulk large. It's over a hundred Earth pounds, but here only about forty. I'm also taking a rope, knife, a pickaxe, a flare pistol, half a dozen flares. And a walkie-talkie.

"It should take me two days to walk the thirty miles to the spot where the tracs last reported. Two days to look around. Two days to get back."

"You be back in five days!" shouted Stroyansky. "That's an order! It shouldn't take you more than one day to scout around. Don't take chances. Five days! Otherwise, court-martial for you, Lane!"

And then, in a softer voice, "Good luck, and, if there is a God, may He help you!"

Lane tried to think of things to say, things that might perhaps have been recorded in the *Doctor Livingstone, I presume,* category. But all he could say was, "So long."

Twenty minutes later, he closed behind him the door to the dome's pressure lock. He strapped on the towering pack and began walking. But when he was about fifty yards from the base, he felt compelled to turn around for one look at what he might never see again. There, on the yellow-red felsite plain, was the pressurized bubble. That was to have been the home of the five men for a year. Nearby squatted the glider that had brought them down, its enormous wings spreading far, its skids covered with the forever blowing dust.

Straight in front of him was the rocket, standing on its fins, pointing towards the blue-black sky, glittering in the Martian sun, shining with promise of power, escape from Mars, and return to the orbital ship. It had come down to the surface of Mars on the back of the glider in a one hundred and twenty mile an hour landing. After it had dropped the two six-ton caterpillar tractors it had carried, it had been pulled off the glider and tilted on end by winches pulled by those very tractors. Now it waited for him

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and for the other four men, too.

"I'll be back," he murmured to it. "And if I have to, I'll take you up by myself."

He began to walk, following the broad double tracks left by the tank. The tracks were faint, for they were two days old, and the blowing silicate dust had almost filled them. The tracks made by the first tank, which had left three days ago, were completely hidden.

The trail led to the northwest. It left the three mile wide plain between two hills of naked rock and entered the quarter-mile wide corridor between two rows of vegetation. The rows ran straight and parallel from horizon to horizon, for miles behind him and miles ahead. A person flying above them would have seen that there were many such lines, marching side by side. To the observers in the orbital ship the hundreds of rows looked like one solid line. That line was one of the so-called canals of Mars.

Lane, on the ground and close to one row, saw it for what it was. Its foundation was an endless three foot high tube, most of whose bulk, like an iceberg's, lay buried in the ground. The curving sides were covered with the bluegreen lichenoids that grew on every rock or projection. From the spine of the tube, separated at regular intervals, grew the trunks of plants. The trunks were smooth shiny bluegreen pillars two feet thick and six feet high. Out of their tops spread radially many pencil-thin branches, like a bat's fingers. Between the fingers stretched a bluegreen membrane, the single tremendous leaf of the umbrella tree.

When Lane had first seen them from the glider as it hurtled over them, he had thought they looked like an army of giant hands uplifted to catch the sun. Giant they were, for each rib-supported leaf measured a hundred feet across. And hands they were—hands to beg for and catch the rare gold of the tiny sun. During the day, the ribs on the side nearest the moving sun dipped towards the ground, and the ribs furthest away tilted upwards. Obviously, the daylong maneuver was designed to expose the complete area of the membrane to the light, to allow not an inch to remain in the shadow.

It was to be expected that strange forms of plant life would be found here. But structures built by animal life were not expected. Especially when they were so large and covered an eighth of the planet.

These structures were the tubes from which rose the trunks of the umbrella trees. Lane had tried to drill through the rocklike side of the tube. So hard was it, it had blunted one drill and had done a second no good before he had chipped off a small piece. Con-

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tented for the moment with that, he had taken it to the dome, there to examine it under a microscope. After an amazed look, he had whistled. Embedded in the cement-like mass were plant cells. Some were partially destroyed; some, whole.

Further tests had shown him that the substance was composed of cellulose, a lignin-like stuff, various nucleic acids, and unknown materials.

He had reported to the orbital ship his discovery and also his conjecture. Some form of animal life had, at some time, chewed up and partially digested wood and then had regurgitated it as a cement. From the cement the tubes had been fashioned.

The following day he intended to go back to the tube and blast a hole in it. But two of the men had set out in a tractor on a field exploration. Lane, as radio operator for that day, had stayed in the dome. He was to keep in contact with the two, who were to report to him every fifteen minutes.

The tank had been gone about two hours and must have been about thirty miles away, when it had failed to report. Two hours later, the other tank, carrying two men, had followed the prints of the first party. They had gone about thirty miles away from the base and were maintaining continuous radio contact with Lane.

"There's a slight obstacle ahead," Greenberg had said. "It's a tube coming out at right angles from the one we've been paralleling. It has no plants growing from it. Not much of a rise, not much of a drop on the other side, either. We'll make it easy."

Then he had yelled.

That was all.

Now, the day after, Lane was on foot, following the fading trail. Behind him lay the base camp, close to the junction of the two *canali* known as Avernus and Tartarus. He was between two of the rows of vegetation which formed Tartarus, and he was traveling northeastward, towards the Sirenum Mare, the so-called Siren Sea. The Mare, he supposed, would be a much broader group of tree-bearing tubes.

He walked steadily while the sun rose higher and the air grew warmer. He had long ago turned off his suit-heater. This was summer and close to the equator. At noon the temperature would be around 70 degrees Fahrenheit.

But at dusk, when the temperature had plunged through the dry air to zero, Lane was in his sleeping tent. It looked like a cocoon, being sausage-shaped and not much larger than his body. It was inflated so he could remove his helmet and breathe while he warmed himself from the battery-operated heater and ate and drank. The tent was also very flexible; it changed its cocoon

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shape to a triangle while Lane sat on a folding chair from which hung a plastic bag and did that which every man must do, regardless of how annoying and disgusting.

During the daytime he did not have to enter the sleeping tent for this. His suit was ingeniously contrived so he could unflap the rear section and expose the necessary area without losing air or pressure in the rest of his suit. Naturally, there was no thought of tempting the teeth of the Martian night. Sixty seconds at midnight were enough to get a severe frostbite on where one sat down.

Lane slept until half an hour after dawn, ate, deflated the tent, folded it, stowed it, the battery, heater, food-box, and folding chair into his pack, threw away the plastic sack, shouldered the pack, and began walking.

By noon the tracks faded out completely. It made little difference, for there was only one route the tanks could have taken. That was the corridor between the tubes and the trees.

Now he saw what the two tanks had reported. The trees on his right began looking dead. The trunks and leaves were brown, and the ribs drooped.

He began walking faster, his heart beating hard. An hour passed, and still the line of dead trees stretched for as far as he could see.

"It must be about here," he said out loud to himself.

Then he stopped. Ahead was an obstacle. It was the tube of which Greenberg had spoken, the one that ran at right angles to the other two and joined them.

Lane looked at it and thought that he could still hear Greenberg's despairing cry. That thought seemed to turn a valve in him so that the immense pressure of loneliness, which he had succeeded in holding back until then, flooded in. The blueblack of the sky became the blackness and infinity of space itself, and he was a speck of flesh in an immensity as large as Earth's land area, a speck that knew no more of this world than a new born baby knew of his.

Tiny and helpless, like a baby . . .

No, he murmured to himself, not a baby. Tiny, yes. Helpless, no. Baby, no. I am a man, a man, an Earthman . . .

Earthman: Cardigan Lane. Citizen of the U.S.A. Born in Hawaii, the fiftieth state. Of mingled German, Dutch, Chinese, Japanese, Negro, Cherokee, Polynesian, Portuguese, Russian-Jewish, Irish, Scotch, Norwegian, Finnish, Czech, English, and Welsh ancestry. Thirty-one years old. Five foot six. One hundred and forty pounds. Brown-haired. Blue-eyed. Hawk-featured. M.D. and Ph.D. Married. Childless. Methodist. Sociable mesomorphic mesovert. Ra-

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dio ham. Dog breeder. Deer hunter. Skin diver. Writer of first-rate but far from great poetry. All contained in his skin and his pressure suit, plus a love of companionship and life, an intense curiosity, and a courage. And now very much afraid of losing everything except his loneliness.

For some time he stood like a statue before the three foot-high wall of the tube. Finally, he shook his head violently, shook off his fear like a dog shaking off water after swimming. Lightly, despite the towering pack on his back, he leaped up onto the top of the tube and looked on the other side, though there was nothing he had not seen before jumping.

The view before him differed from the one behind in only one thing. This was the number of small plants that covered the ground. Or, rather, he thought, after taking a second look, he had never seen these plants this size before. They were foot high replicas of the huge umbrella trees that sprouted from the tubes. And they were not scattered at random, as might have been expected if they had grown from seeds blown by the wind. Instead, they grew in regular rows, the edges of the plants in one row separated from the other by about two feet.

His heart beat even faster. Such spacing must mean they were planted by intelligent life. Yet, intelligent life seemed very improbable, given the Martian environment.

Possibly, some natural condition might have caused the seeming artificiality of this garden. He would have to investigate.

Always with caution, though. So much depended on him: the lives of the four men, the success of the expedition. If this one failed, it might be the last. Many people on Earth were groaning loudly because of the cost of the Space Arm and crying wildly for results that meant money and power.

The field, or garden, extended for about three hundred yards. At its far end was another tube at right angles to the two parallel ones. And at this point the giant umbrella plants regained their living and shining blue-green color.

The whole set-up looked very much to Lane like a sunken garden. The square formation of the high tubes kept out the wind and most of the felsite flakes. The walls held the heat within the square.

Lane searched the top of the tube for bare spots where the metal plates of the caterpillar tractor's treads would have scraped off the lichenoids. He found none but was not surprised. The lichenoids grew phenomenally fast under the summertime sun.

He looked down at the ground on the garden side of the tube, where the tractors had presumably

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descended. Here there were no signs of the tractors' passage, for the little umbrellas grew up to within two feet of the edge of the tube, and they were uncrushed.

Nor did he find any tracks at the ends of the tube where it joined the parallel rows.

He paused to think about his next step and was surprised to find himself breathing hard. A quick check of his air gauge showed him that the trouble wasn't an almost empty tank. No, it was the apprehension, the feeling of eeriness, of something *wrong*, that was causing his heart to beat so fast, to demand more oxygen.

Where could two tractors and four men have gone? And what could have caused them to disappear?

Could they have been attacked by some form of intelligent life? If that had happened, the unknown creatures had either carried off the six-ton tanks, or driven them away, or else forced the men to drive them off.

Where? How? By whom? The hairs on the back of his neck stood up.

"Here is where it must have happened," he muttered to himself. "The first tank reported seeing this tube barring its way and said it would report again in another ten minutes. That was the last I heard from it. The second was cut off just as it was on top of the tube. Now, what happened? There are no cities on the surface of Mars, and no indications of underground civilization. The orbital ship would have seen openings to such a place through its telescope . . ."

He yelled so loudly that he was deafened as his voice bounced off the confines of his helmet. Then he fell silent, watching the line of blue globes rise from the soil at the far end of the garden and swiftly soar into the sky.

He threw back his head until the back of it was stopped by the helmet and watched the rising globes, basketball size on appearing from the ground, swell until they seemed to be hundreds of feet across. Suddenly, like a soap bubble, the topmost one disappeared.

The second in line, having reached the height of the first, also popped. And the others followed.

They were transparent, he could see some white cirrus clouds through the blue of the bubbles.

Lane did not move but watched the steady string of globes spurt from the soil. Though startled, he did not forget his training. He noted that the globes, besides being semi-transparent, rose at a right angle to the ground and did not drift with the wind. He counted them and got to forty-nine when they ceased appearing.

He waited for fifteen minutes. When it looked as if nothing more

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would happen, he decided that he must investigate the spot where the globes seemed to have popped out of the ground. Taking a deep breath, he bent his knees and jumped out into the garden. He landed lightly about twelve feet out from the edge of the tube and between two rows of plants.

For a second, he did not know what was happening, though he realized that something was wrong. Then, he whirled around. Or tried to do so. One foot came up, but the other sank deeper. He took one step forward, and the forward foot disappeared also into the thin stuff beneath the red-yellow dust. The other foot was by now too deep to be pulled out.

Then he was hip-deep and grabbing at the stems of the plants to both sides of him.

They uprooted easily, coming out of the soil, one clenched in each hand.

He dropped them and threw himself back in the hope he could free his legs and lie stretched out on the jellylike stuff. Perhaps, if his body presented enough of an area, he could keep from sinking. And, after a while, he might be able to work his way to the ground by the tube. There, he hoped, it would be firm.

His violent effort succeeded. His legs came up out of the sticky semi-liquid. He was spread-eagled on his back and was looking up at the sky through the transparent dome of his helmet. The sun was to his left; when he turned his head inside the helmet he could see the sun sliding down the arc from the zenith. It was descending slightly slower than it would on Earth, for Mars' day was about forty minutes longer. He hoped that if he couldn't regain solid ground, he could remain suspended until evening fell. By then this quagmire would be sufficiently frozen to enable him to rise and walk on it—provided that he got up before he himself was frozen fast.

Meanwhile, he would follow the approved method of saving oneself when trapped in quicksand. He would roll over quickly, once, and then spreadeagle himself out again. By repeating this maneuver, he might eventually reach that bare strip of soil by the tube.

The pack on his back prevented him from rolling. The straps around his shoulders would have to be loosened.

He did so, and at the same time felt his legs sinking. Their weight was pulling them under, whereas the air tanks in the pack, the air tanks strapped to his chest, and the bubble of his helmet were giving the upper part of his body buoyancy.

He turned over on his side, grabbed the pack, and pulled himself up on it. The pack, of course, went under. But his legs were free, though slimy with liquid

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and caked with dust, and he was standing on top of the narrow island of the pack.

The thick jelly rose up to his ankles while he considered two courses of action.

He could squat on the pack and hope that it would not sink too far before it was stopped by the permanently frozen layer that must exist. . . .

How far? He had gone down hip-deep and felt nothing form beneath his feet. And . . . He groaned. The tractors! Now he could see what had happened to them. They had gone over the tube and down into the garden, never suspecting that the seeming solid surface covered this quagmire. And down they had plunged, and it had been Greenberg's horrified realization of what lay beneath the dust that had made him cry out, and then the stuff had closed over the tank and its antenna, and the transmitter, of course, had been cut off.

He must give up his second choice because it did not exist. To get to the bare strip of soil by the tube would be useless. It would be as unfirm as the rest of the garden. It was at that point that the tanks must have fallen in.

Another thought came to him; that was that the tanks must have disturbed the orderly arrangement of the little umbrellas close to the tube. Yet, there was no sign of such a happening. Therefore, somebody must have rescued the plants and set them up again. That meant that somebody might come along in time to rescue him.

Or to kill him, he thought. In either event, he would have his problem solved.

Meanwhile, he knew it was no use to make a jump from the pack to the strip by the tube. The only thing to do was to stay on top of the pack and hope it didn't sink too deeply.

However, the pack did sink. The jelly rose swiftly to his knees, then his rate of descent began slowing. He prayed, not for a miracle but only that the buoyancy of the pack plus the tank on his chest would keep him from going completely under.

Before he had finished praying, he had stopped sinking. The sticky stuff had risen no higher than his breast and had left his arms free.

He gasped with relief but did not feel overwhelmed with joy. In less than four hours the air in his tank would be exhausted. Unless he could get another tank from the pack, he was done for.

He pushed down hard on the pack and threw his arms up in the air and back in the hope his legs would rise again and he could spreadeagle. If he could do that, then the pack, relieved of his weight, might rise to the surface, and he could get another tank from it.

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But his legs, impeded by the stickiness, did not rise far enough, and his body, shooting off in reaction to the kick, moved a little distance from the pack. It was just far enough so that when the legs inevitably sank again, they found no platform on which to be supported. Now he had to depend entirely on the lift of his air tank.

It did not give him enough to hold him at his former level; this time he sank until his arms and shoulders were under, and only his helmet stuck out.

He was helpless.

Several years from now the second expedition, if any, would perhaps see the sun glinting off his helmet and would find his body stuck like a fly in glue. If that does happen, he thought, I will at least have been of some use; my death will warn them of this trap.

But I doubt if they'll find me. I think that Somebody or Something will have removed me and hidden me.

Then, feeling an inrush of despair, he closed his eyes and murmured some of the words he had read that last night in the base, though he knew them so well it did not matter whether he had recently read them or not.

Yea, though I walk through the valley of the shadow of death, I will fear no evil; for thou art with me.

Repeating that didn't lift the burden of hopelessness. He felt absolutely alone, deserted by everybody, even by his Creator. Such was the desolation of Mars.

But when he opened his eyes, he knew he was not alone. He saw a Martian.

A hole had appeared in the wall of the tube to his left. It was a round section about four feet across, and it had sunk in as if it had been a plug being pulled inwards, as indeed it was.

A moment later, a head popped out of the hole. The size of a Georgia watermelon, it was shaped like a football and was as pink as a baby's bottom. Its two eyes were as large as coffee cups and each was equipped with two vertical lids. It opened its two parrotlike beaks, ran out a very long tubular tongue, withdrew the tongue, and snapped the beak shut. Then it scuttled out from the hole to reveal a body also shaped like a football and only three times as large as its head. The pinkish body was supported three feet from the ground on ten spindly spidery legs, five on each side.

Its legs ended in broad round pads on which it ran across the jellymire surface, sinking only slightly. Behind it streamed at least fifty others.

These picked up the little plants that Lane had upset in his struggles and licked them clean with narrow round tongues that shot out at least two feet. They also seemed to communicate by touch-

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ing their tongues, as insects do with antennae.

As he was in the space between two rows, he was not involved in the setting up of the dislodged plants. Several of them ran their tongues over his helmet, but these were the only ones that paid him any attention. It was then that he began to quit dreading that they might attack him with their powerful-looking beaks. Now he broke into a cold sweat at the idea that they might ignore him completely.

That was just what they did. After gently embedding the thin roots of the plantlets in the sticky stuff, they raced off towards the hole in the tube.

Lane, overwhelmed with despair, shouted after them, though he knew they couldn't hear him through his helmet and the thin air even if they had hearing organs.

"Don't leave me here to die!"

Nevertheless, that was what they were doing. The last one leaped through the hole, and the entrance stared at him like the round black eye of Death itself.

He struggled furiously to lift himself from the mire, not caring that he was only exhausting himself.

Abruptly, he stopped fighting and stared at the hole. A figure had crawled out of it, a figure in a pressure-suit.

Now he shouted with joy. Whether the figure was Martian or not, it was built like a member of *homo sapiens*. It could be presumed to be intelligent and therefore curious.

He was not disappointed. The suited being stood up on two hemispheres of shiny red metal and began walking towards him on them in a sliding fashion. Reaching him, it handed him the end of a plastic rope it was carrying under its arm.

He almost dropped it. His rescuer's suit was transparent. It was enough of a shock to see clearly the details of the creature's body, but the sight of the two heads within the helmet caused him to turn pale.

The Martian slidewalked to the tube from which Lane had leaped. It jumped lightly from the two bowls on which it had stood, landed on the three foot high top of the tube, and then began hauling Lane out from the mess. He came out slowly but steadily and soon was scooting forward, gripping the rope. When he reached the foot of the tube, he was hauled on up until he could get his feet in the two bowls. It was easy to jump from them to a place beside the biped.

It unstrapped two more bowls from its back, gave them to Lane, then lowered itself on the two in the garden. Lane followed it across the mire. Entering the hole, he found himself in a chamber so

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low he had to crouch. Evidently, it had been constructed by the dekapeds and not by his companion for it, too, had to bend its back and knees.

Lane was pushed to one side by some dekapeds. They picked up the thick plug, made of the same grey stuff as the tubewalls, and sealed the entrance with it. Then they shot out of their mouths strands after strands of grey spiderwebby stuff to seal the plug.

The biped motioned Lane to follow it, and it slid down a tunnel which plunged into the earth at a forty-five degree angle. It illuminated the passage with a flashlight which it had taken from its belt. They came into a large chamber which contained all of the fifty dekapeds. These were waiting motionlessly for something. The biped, as if sensing Lane's curiosity, pulled off its glove and held it before several small vents in the wall. Lane removed his glove and felt warm air flowing from the holes.

Evidently this was a pressure chamber, built by the ten-legged things. But such evidence of intelligent engineering did not mean that these things had the individual intelligence of a man. It could mean group intelligence such as Terrestrial insects possessed.

After a while, the chamber was filled with air. Another plug was pulled; Lane followed the dekapeds and his rescuer up another forty-five degree tunnel. He estimated that he would find himself inside the tube from which the biped had first come. He was right. He crawled through another hole into it.

And a pair of beaks clicked as they bit down on his helmet!

Automatically, he shoved at the thing, and under the force of his blow the dekaped lost its bite and went rolling on the floor, a bundle of thrashing legs.

Lane did not worry about having hurt it. It did not weigh much, but its body must be tough to be able to plunge without damage from the heavy air inside the tube into the almost-stratospheric conditions outside.

However, he did reach for the knife at his belt. But the biped put its hand on his arm and shook one of its heads. Later, he was to find out that the seeming bite must have been an accident. Always—with one exception—the leggers were to ignore him.

He was also to find that he was lucky. The leggers had come out to inspect their garden because, through some unknown method of detection, they knew that the plantlets had been disturbed. The biped normally would not have accompanied them. However, today, its curiosity aroused because the leggers had gone out three times in three days, it had decided to investigate.

The biped turned out its flash-

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light and motioned to Lane to follow it. Awkwardly, he obeyed. There was light, but it was dim, a twilight. Its source was the many creatures that hung from the ceiling of the tube. These were three feet long and six inches thick, cylindrical, pinkish-skinned, and eyeless. A dozen frondlike limbs waved continuously, their motion keeping air circulating in the tunnel.

Their cold firefly glow came from two globular pulsing organs which hung from both sides of the round looselipped mouth at the free end of the creature. Slime drooled from the mouth and dripped onto the floor or into a narrow channel which ran along the lowest part of the sloping floor. Water ran in the six inch deep channel, the first native water he had seen. The water picked up the slime and carried it a little way before it was gulped up by an animal that lay on the bottom of the channel.

Lane's eyes adjusted to the dimness until he could make out the water-dweller as torpedo-shaped and without eyes or fins. It had two openings in its body; one obviously sucked in water, the other expelled it.

He saw at once what this meant. The water at the North Pole melted in the summertime and flowed into the far end of the tube system. Helped by gravity and by the pumping action of the line of animals in the channel, the water was passed from the edge of the Pole to the equator.

Leggers ran by him on mysterious errands. Several, however, halted beneath some of the down-hanging organisms. They reared up on their hind five legs and their tongues shot out and into the open mouths by the glowing balls. At once, the fireworm—as Lane termed it—its cilia waving wildly, stretched itself to twice its former length. Its mouth met the beak of the legger, and there was an exchange of stuff between their mouths.

Impatiently, the biped tugged at Lane's arm. He followed it down the tube. Soon they entered a section where pale roots came down out of holes in the ceiling and spread along the curving walls, gripping them, then becoming a network of many thread-thin rootlets that crept across the floor and into the water of he channel.

Here and there a dekaped chewed at a root and then hurried off to offer a piece to the mouths of the fire-worms.

After walking for several minutes, the biped stepped across the stream. It then began walking as closely as possible to the wall, meanwhile looking apprehensively at the other side of the tunnel, where they had been walking.

Lane also looked but could see nothing at which to be alarmed.

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There was a large opening at the base of the wall which evidently led into a tunnel. This tunnel, he presumed, ran underground into a room or rooms, for many leggers dashed in and out of it. And about a dozen, larger than average, paced back and forth before the hole like sentries.

When they had gone about fifty yards past the opening, the biped relaxed. After it led Lane for ten minutes, it stopped. Its naked hand touched the wall.

For the first time, he became aware that the hand was small and delicately shaped, like a woman's.

A section of the wall swung out. The biped turned and bent down to crawl into the hole, presenting buttocks and legs that were femininely rounded, well shaped. It was then that he began thinking of it as a female. Yet, the hips, though padded with fatty tissue, were not broad. The bones were not widely separated to make room to carry a child. Despite their curving, the hips were relatively as narrow as a man's.

Behind them, the plug swung shut. The biped did not turn on her flashlight, for there was illumination at the end of the tunnel. The floor and walls were not of the hard grey stuff nor of packed earth. They seemed vitrified, as if glassed by heat.

She was waiting for him when he slid off a three foot high ledge into a large room. For a minute he was blinded by the strong light. After his eyes adjusted, he searched for the source of light but could not find it. He did observe that there were no shadows in the room.

The biped took off her helmet and suit and hung them in a closet. The door slid open as she approached and closed when she walked away.

She signaled that he could remove his suit. He did not hesitate. Though the air might be poisonous, he had no choice. His tank would soon be empty. Moreover, it seemed likely that the atmosphere contained enough oxygen. Even then he had grasped the idea that the leaves of the umbrella plants, which grew out of the top of the tubes, absorbed sunlight and traces of carbon dioxide. Inside the tunnels, the roots drew up water from the channel and absorbed the great quantity of carbon dioxide released by the dekapeds. Energy of sunlight converted gas and liquid into glucose and oxygen, which were given off in the tunnels.

Even here, in this deep chamber which lay beneath and to one side of the tube, a thick root penetrated the ceiling and spread its thin white webs over the walls. He stood directly beneath the fleshy growth as he removed his helmet and took his first breath of Martian air.

Immediately afterward, he

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jumped. Something wet had dropped on his forehead. Looking up, he saw that the root was excreting liquid from a large pore.

He wiped the drop off with his finger and tasted it. It was sticky and sweet. Well, he thought, the tree must normally drop sugar in water. But it seems to be doing so abnormally fast.

Then it came to him that perhaps this was because it was getting dark outside and therefore cold. The umbrella trees might be pumping the water in their trunks into the warm tunnels. Thus, during the bitter sub-zero night, they'd avoid freezing and swelling up and cracking wide open.

It seemed a reasonable theory.

He looked around. The place was half living quarters, half biological laboratory. There were beds and tables and chairs and several unidentifiable articles. One was a large black metal box in a corner. From it, at regular intervals, issued a stream of tiny blue bubbles. They rose to the ceiling, growing larger as they did so. On reaching the ceiling, they did not stop or burst but simply penetrated the vitrification as if it did not exist.

Lane knew now the origin of the blue globes he had seen appear from the surface of the garden. But their purpose was still obscure.

He wasn't given much time to watch the globes. The biped took a large green ceramic bowl from a cupboard and set it on a table. Lane eyed her curiously, wondering what she was going to do. By now he had seen that the second head belonged to an entirely separate creature. Its slim six-foot length of pinkish skin was coiled about her neck and torso; its tiny flatfaced head turned towards Lane; its snaky light blue eyes glittered. Suddenly, its mouth opened and revealed toothless gums, and its bright red tongue, mammalian, not at all reptilian, thrust out at him.

The biped, paying no attention to the worm's actions, lifted it from her. Gently, cooing a few words in a soft many-voweled language, she placed it in the bowl. It settled inside and looped around the curve, like a snake in a pit.

The biped took a pitcher from the top of a box of red plastic. Though the box was not connected to any visible power source, it seemed to be a stove. The pitcher contained warm water which she poured into the bowl, half filling it. Under the shower, the worm closed its eyes as if it were purring.

Then the biped did something that alarmed Lane.

She leaned over the bowl and vomited into it.

He stepped towards her. Unmindful of the fact that she couldn't understand him, he said, "Are you sick?"

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She revealed human-looking teeth in a smile meant to reassure him, and she walked away from the bowl. He looked at the worm, which had its head dipped into the mess. Suddenly, he felt sick, for he was sure that it was feeding off the mixture. And he was equally certain that she fed the worm regularly with regurgitated food.

It didn't cancel his disgust to reflect that he shouldn't react to her as he would to a Terrestrial. He knew that she was totally alien and that it was inevitable that some of her ways would repulse, perhaps even shock, him. Rationally, he knew this. But if his brain told him to understand and forgive, his belly said to loathe and reject.

His aversion was not much lessened by a close scrutiny of her as she took a shower in a cubicle set in the wall. She was about five feet tall and was slim as a woman should be slim, with delicate bones beneath rounded flesh. Her legs were human; in nylons and high heels they would have been exciting—other things being equal. However, if the shoes had been toeless, her feet would have caused much comment. They had four toes.

Her long beautiful hands had five fingers. These seemed nailless, like the toes, though a closer examination later showed him they bore rudimentary nail.

She stepped from the cubicle and began toweling herself, though not before she motioned to him to remove his suit and also to take a shower. He stared intently back at her until she laughed a short embarrassed laugh. It was feminine, not at all deep. Then she spoke.

He closed his eyes and was hearing what he had not thought he would hear for years: a woman's voice. Hers was extraordinary; husky and honeyed at the same time.

But when he opened his eyes, he saw her for what she was. No woman. No man. What? It? No. The impulse to think *her, she* was too strong.

This, despite her lack of mammaries. She had a chest, but no nipples, rudimentary or otherwise. Her chest was a man's, muscled under the layer of fat which subtly curved to give the impression that beneath it . . . budding breasts?

No, not this creature. She would never suckle her young. She did not even bear them alive, if she *did* bear. Her belly was smooth, undimpled with a navel.

Smooth also was the region between her legs, hairless, unbroken, as innocent of organ as if she were a nymph painted for some Victorian children's book.

It was that sexless joining of the legs that was so horrible. Like the white belly of a frog, thought Lane, shuddering.

At the same time, his curiosity

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became even stronger. How did this thing mate and reproduce?

Again, she laughed and smiled with pale-red, humanly everted lips and wrinkled a short slightly uptilted nose and ran her hand through thick straight red-gold fur. It was fur, not hair, and it had a slightly oily sheen, like a water-dwelling animal's.

The face itself, though strange, could have passed for human, but only passed. Her cheekbones were very high and protruded upwards in an unhuman fashion. Her eyes were dark blue and quite human. This meant nothing. So were an octopus' eyes.

She walked to another closet, and as she went away from him he saw again that though the hips were curved like a woman's they did not sway with the pelvic displacement of the human female.

The door swung momentarily open, revealed the carcasses of several dekapeds, minus their legs, hanging on hooks. She removed one, placed it on a metal table, and out of the cupboard took a saw and several knives and began cutting.

Because he was eager to see the anatomy of the dekaped, he approached the table. She waved at him to take a shower. Lane removed his suit. When he came to his knife and axe, he hesitated, but, afraid she might think him distrustful, he hung up the belt containing his weapons beside the suit. However, he did not take off his clothes because he was determined to view the inner organs of the animal. Later, he would shower.

The legger was not an insect despite its spidery appearance. Not in the terrestrial sense, certainly. Neither was it a vertebrate. Its smooth hairless skin was an animal's, as lightly pigmented as a blond Swede's. But, though it had an endoskeleton, it had no backbone. Instead, the body bones formed a round cage. Its thin ribs radiated from a cartilaginous collar which adjoined the back of the head. The ribs curved outwards, then in, almost meeting at the posterior.

Inside the cage were ventral lungsacs, a relatively large heart, and liver-like and kidney-like organs. Three arteries, instead of the mammalian two, left the heart. He couldn't be sure with such a hurried examination, but it looked as if the dorsal aorta, like some Terrestrial reptiles, carried both pure and impure blood.

There were other things to note. The most extraordinary was that, as far as he could discern, the legger had no digestive system. It seemed to lack both intestines and anus unless you would define as an intestine a sac which ran straight through from the throat halfway into the body. Further, there was nothing he could identify as reproductive organs, though

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this did not mean that it did not possess them. The creature's long tubular tongue, cut open by the biped, exposed a canal running down the length of tongue from its open tip to a bladder at its base. Apparently, these formed part of the excretory system.

Lane wondered what enabled the legger to stand the great pressure differences between the interior of the tube and the Martian surface. At the same time he realized that this ability was no more wonderful than the biological mechanism which gave whales and seals the power to endure without harm the enormous pressures a half mile below the sea's surface.

The biped looked at him with round and very pretty blue eyes, laughed, and then reached into the chopped open skull and brought out the tiny brain.

"Hauaimi," she said slowly. She pointed to her head, repeated, *"Hauaimi,"* and then indicated his head. *"Hauaimi."*

Echoing her, he pointed at his own head. *"Hauaimi.* Brain."

"Brain," she said, and she laughed again.

She proceeded to call out the organs of the legger which corresponded to hers. Thus, the preparations for the meal passed swiftly as he proceeded from the carcass to other objects in the room. By the time she had fried the meat and boiled strips of the membranous leaf of the umbrella plant, and also added from cans various exotic foods, she had exchanged at least forty words with him. An hour later, he could remember twenty.

There was one thing yet to learn. He pointed to himself and said, "Lane."

Then he pointed to her and gave her a questioning look.

"Mahrseeya," she said.

"Martia?" he repeated. She corrected him, but he was so struck by the resemblance that always afterwards he called her that. After a while, she would give up trying to teach him the exact pronunciation.

Martia washed her hands and poured him a bowlful of water. He used the soap and towel she handed him, then walked to the table where she stood waiting. On it was a bowl of thick soup, a plate of fried brains, a salad of boiled leaves and some unidentifiable vegetables, a plate of ribs with thick dark legger meat, hard boiled eggs, and little loaves of bread.

Martia gestured for him to sit down. Evidently, her code did not allow her to sit down before her guest did. He ignored his chair, went behind her, put his hand on her shoulder, pressed down, and with the other hand slid her chair under her. She turned her head to smile up at him. Her fur slid away to reveal one lobeless pointed ear. He scarcely noticed it, for he was too intent on the half-re-

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pulsive, half-heartquickening sensation he got when he touched her skin. It had not been the skin itself that caused that, for she was soft and warm as a young girl. It had been the *idea* of touching her.

Part of that, he thought as he seated himself, came from her nakedness. Not because it revealed her sex but because it revealed her lack of it. No breasts, no nipples, no navel, no pubic fold or projection. The absence of these seemed wrong, very wrong, unsettling. It was a shameful thing that she had nothing of which to be ashamed.

That's a queer thought, he said to himself. And for no reason, he became warm in the face.

Martia, unnoticing, poured from a tall bottle a glassful of dark wine. He tasted it. It was exquisite, no better than the best Earth had to offer but as good.

Martia took one of the loaves, broke it into two pieces, and handed him one. Holding the glass of wine in one hand and the bread in the other, she bowed her head, closed her eyes, and began chanting.

He stared at her. This was a prayer, a grace-saying. Was it the prelude to a sort of communion, one so like Earth's it was startling?

Yet, if it were, he needn't be surprised. Flesh and blood, bread and wine: the symbolism was simple, logical, and might even be universal. However, it was possible that he was creating parallels that did not exist. She might be enacting a ritual whose origin and meaning were like nothing of which he had ever dreamed.

If so, what she did next was equally capable of misinterpretation. She nibbled at the bread, sipped the wine, and then plainly invited him to do the same. He did so. Martia took a third and empty cup, spat a piece of wine-moistened bread into the cup, and indicated that he was to imitate her.

After he did, he felt his stomach draw in on itself. For she mixed the stuff from their mouths with her finger and then offered it to him. Evidently, he was to put it in his mouth and eat it.

So, the action was both physical and metaphysical! The bread and the wine were the flesh and blood of whatever divinity she worshipped. More, she, being imbued with the body and the spirit of the god, now wanted to mingle hers and that of the god's with his.

What I eat of the god's, I become. What you eat of me, you become. What I eat of you, I become. Now we three are become one.

Lane, far from being repelled by the concept, was excited. He knew that there were probably many Christians who would have refused to share in the communion because the ritual did not have the same origins or conform to

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theirs. They might even have thought that by sharing they were subscribing to an alien god. Such an idea Lane considered to be not only narrow-minded and inflexible, but illogical, uncharitable, and ridiculous. There could be but one Creator; what names the creature gave to the Creator did not matter.

Lane believed sincerely in a personal god, one who took note of him as an individual. He also believed that mankind needed redeeming and that a redeemer had been sent to Earth. And if other worlds needed redeeming, then they too would have gotten or would get a redeemer. He went perhaps further than most of his fellow religionists, for he actually made an attempt to practice love for mankind. This had given him somewhat of a reputation as a fanatic among his acquaintances and friends. However, he had been restrained enough not to make himself too much of a nuisance, and his warmheartedness had made him welcome.

Six years before, he had been an agnostic. His first trip into space had been the thing to convert him. The overwhelming experience had made him realize shatteringly what an insignificant being he was, how awe-inspiringly complicated and immense was the universe, and how much he needed a framework within which to be and to become.

The strangest feature about his conversion, he thought afterwards, was that one of his companions on that maiden trip had been a devout believer who, on returning to Earth, had renounced his own sect and faith and become a complete atheist.

He thought of this as he took her proffered finger in his mouth and sucked the paste off it. Then obeying her gestures, he dipped his own finger into the bowl and put it between her lips.

She closed her eyes and gently mouthed the finger. When he went to withdraw it, he was stopped by her hand on his wrist. He did not insist on taking the finger out, for he wanted to avoid offending her. Perhaps a long time interval was part of the rite.

But her expression seemed so eager and at the same time so ecstatic, like a hungry baby just given the nipple, that he felt uneasy. After a minute, seeing no indication on her part that she meant to quit, he slowly but firmly pulled the finger loose. She opened her eyes and sighed, but she made no comment. Instead, she began serving his supper.

The hot thick soup was delicious and invigorating. Its texture was somewhat like the plankton soup that was becoming popular on hungry Earth, but it had no fishy flavor. The brown bread reminded him of rye. The legger meat was like wild rabbit, though

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it was sweeter and had an unidentifiable tang. He took only one bite of the leaf salad and then frantically poured wine down his throat to wash away the burn.

Tears came to his eyes, and he coughed until she spoke to him in an alarmed tone. He smiled back at her but refused to touch the salad again. The wine not only cooled his mouth, it filled his veins with singing. He told himself he should take no more. Nevertheless, he finished his second cup before he remembered his resolve to be temperate.

By then it was too late. The strong liquor went straight to his head; he felt dizzy and wanted to laugh. The events of the day, his near escape from death, the reaction of knowing his comrades were dead, his realization of his present situation, the tension caused by his encounters with the dekapeds, and his unsatisfied curiosity about Martia's origins and the location of others of her kind, all these combined in him in a half-stupor, half-exuberance.

He rose from the table and offered to help Martia with the dishes. She shook her head and put the dishes in a sonic washer. In the meantime, he decided that he needed to wash off the sweat, stickiness, and body odor left by two days of travel. On opening the door to the shower cubicle, he found that there wasn't room enough to hang his clothes in it. So, uninhibited by fatigue and wine, also mindful that Martia, after all, was *not* a female, he removed his clothes.

Martia watched him, and her eyes became wider with each garment shed. Finally, she gasped and stepped back and turned pale.

"It's not that bad," he growled, wondering what had caused her reaction. "After all, some of the things I've seen around here aren't too easy to swallow."

She pointed with a trembling finger and asked him something in a shaky voice.

Perhaps it was his imagination, but he could swear she used the same inflection as would an English speaker.

"Are you sick? Are the growths malignant?"

He had no words with which to explain, nor did he intend to illustrate function through action. Instead, he closed the door of the cubicle after him and pressed the plate that turned on the water. The heat of the shower and the feel of the soap, of grime and sweat being washed away, soothed him somewhat so that he could think about matters he had been too rushed to consider.

First, he would have to learn Martia's language or teach her his. Probably, both would happen at the same time. Of one thing he was sure. That was that her intentions towards him were, at least at present, peaceful. When

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she had shared communion with him, she had been sincere. He did not get the impression that it was part of her cultural training to share bread and wine with a person she intended to kill.

Feeling better, though still tired and a little drunk, he left the cubicle. Reluctantly, he reached for his dirty shorts. Then, he smiled. They had been cleaned while he had taken a shower. Martia, however, paid no attention to his smile of pleased surprise but, grim-faced, she motioned to him to lie down on the bed and sleep. Instead of lying down herself, however, she picked up a bucket and began crawling up the tunnel. He decided to follow her, and, when she saw him, she only shrugged her shoulders.

On emerging into the tube, Martia turned on her flashlight. The tunnel was in absolute darkness. Her beam, playing on the ceiling, showed that the glowworms had turned out their lights. There were no leggers in sight.

She pointed the light at the channel so he could see that the jetfish were still taking in and expelling water. Before she could turn the beam aside, he put his hand on her wrist and with his other hand lifted a fish from the channel. He had to pull it loose with an effort, which was explained when he turned the torpedo-shaped creature over and saw the column of flesh hanging from its belly. Now he knew why the reaction of the propelled water did not shoot them backwards. The ventral-foot acted as a suction pad to hold them to the floor of the channel.

Somewhat impatiently, Martia pulled away from him and began walking swiftly back up the tunnel. He followed her until she came to the opening in the wall which had earlier made her so apprehensive. Crouching, she entered the opening, but before she had gone far she had to move a tangled heap of leggers to one side. These were the large great-beaked ones he had seen guarding the entrance. Now, they were asleep at the post. If so, he reasoned, then the thing they guarded against must also be asleep.

What about Martia? How did she fit into their picture? Perhaps she didn't fit into their picture at all. She was absolutely alien, something for which their instinctual intelligence was not prepared and which, therefore, they ignored. That would explain why they had paid no attention to him when he was mired in the garden.

Yet, there must be an exception to that rule. Certainly, Martia had not wanted to attract the sentinels' notice the first time she had passed the entrance.

A moment later, he found out why. They stepped into a huge chamber which was at least two hundred feet square. It was as

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dark as the tube, but during the waking period it must have been very bright because the ceiling was jammed with glowworms.

Martia's flash raced around the chamber, showing him the piles of sleeping leggers. Then, suddenly, it stopped. He took one look, and his heart raced, and the hairs on the back of his neck rose.

Before him was a worm three feet high and twenty feet long!

Unthinkingly, he grabbed hold of Martia to keep her from coming closer to it. But even as he touched her, he dropped his hand. She must know what she was doing.

Martia pointed the flash at her own face and smiled as if to tell him not to be alarmed. And she touched his arm with a shyly affectionate gesture. For a moment, he didn't know why. Then it came to him that she was glad because he had been thinking of her welfare. Moreover, her reaction showed she had recovered from her shock at seeing him unclothed.

He turned from her to examine the monster. It lay on the floor, asleep, its great eyes closed behind vertical slits. It had a great head, football-shaped like those of the little leggers around it. Its mouth was huge, but the beaks were very small, horny warts on its lips. The body, however, was that of a caterpillar worm's, minus the hair. Ten little useless legs stuck out of its side, too short even to reach the floor. Its sides bulged as if pumped full of gas.

Martia walked past the monster and paused by its posterior. Here she lifted up a fold of skin. Beneath it was a pile of a dozen leathery-skinned eggs, held together by a sticky secretion.

"Now I've got it," muttered Lane. "Of course. The egg-laying queen. She specializes in reproduction. That is why the others have no reproductive organs, or else they're so rudimentary I couldn't detect them. The leggers are animals, all right, but in some things they resemble terrestrial insects.

"Still, that doesn't explain the absence of a digestive system."

Martia put the eggs in her bucket and started to leave the room. He stopped her and indicated he wanted to look around some more. She shrugged her shoulders and began to lead him around. Both had to be careful not to step on the dekapeds, which lay everywhere.

They came to an open bin made of the same grey stuff as the walls. Its interior held many shelves, on which lay hundreds of eggs. Strands of the spiderwebby stuff kept the eggs from rolling off. Nearby was another bin that held water. At its bottom lay more eggs. Above them minnow-sized torpedo shapes flitted about in the water.

Lane's eyes widened at this.

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The fish were not members of another genus but were the larvae of the leggers. And they could be set in the channel not only to earn their keep by pumping water which came down from the north pole but to grow until they were ready to metamorphose into the adult stage.

However, Martia showed him another bin which made him partially revise his first theory. This bin was dry, and the eggs were laid on the floor. Martia picked one up, cut its tough skin open with her knife, and emptied its contents into one hand.

Now his eyes did get wide, for this creature had a tiny cylindrical body, a suction pad at one end, a round mouth at the other, and two globular organs hanging by the mouth. A young glowworm.

Martia looked at him to see if he comprehended. Lane held out his hands and hunched his shoulders with an *I-don't-get-it* air. Beckoning, she walked to another bin to show him more eggs. Some had been ripped from within, and the little fellows whose hard beaks had done it were staggering around weakly on ten legs.

Energetically, Martia went through a series of charades. Watching her, he began to understand.

The embryos that remained in the eggs until they fully developed went through three main metamorphoses; the jetfish stage, the glowworm stage, and, finally, the baby dekaped stage. If the eggs were torn open by the adult nurses in one of the first two stages, the embryo remained fixed in that form. However, it did grow larger.

What about the queen? he asked her by pointing to the monstrously egg-swollen body.

For answer, Martia picked up one of the newly-hatched. It kicked its many legs but did not otherwise protest, being, like all of its kind, mute. Martia turned it upside down and indicated a slight crease in its posterior. Then she showed him the same spot in one of the sleeping adults. The adult's rear was smooth, innocent of the crease.

Martia made eating gestures. He nodded. The creatures were born with rudimentary sexual organs, but these never developed. In fact, they atrophied completely, unless the young were given a special diet, in which case they matured into egglayers.

But, the picture wasn't complete. If you had females, you had to have males. It was doubtful if such highly developed animals were self-fertilizing or reproduced parthenogenetically.

Then, he remembered Martia and began doubting. She gave no evidence of reproductive organs. Could her kind be self-reproducing? Or was she a martin, her natural fulfillment diverted by diet?

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It didn't seem likely, but he couldn't be sure that such things were not possible in her scheme of Nature.

Lane wanted to satisfy his curiosity, so, ignoring her desire to get out of the chamber, he examined each of the five baby dekapeds. All were potential females.

Suddenly, Martia, who had been grave-facedly watching him, smiled and took his hand, and led him to the rear of the room. Here, as they approached another structure, he smelled a strong odor, which reminded him of clorox.

Closer to the structure, he saw that it was not a bin but was a hemispherical cage. Its bars were of the hard grey stuff, and they curved up from the floor to meet at a central point. There was no door. Evidently, the cage had been built around the thing in it, and its occupant must remain until he died.

Martia soon showed him why this thing was not allowed freedom. It—he—was sleeping, but Martia reached through the bars and struck it on the head with her fist. The thing did not respond until it had been hit five more times. Then, slowly, it opened its sidewise lids to reveal great staring eyes, bright as arterial blood.

Martia threw one of the eggs at the thing's head. Its beak opened swiftly, the egg disappeared, the beak closed, and there was a noisy gulp.

Food brought it to life. It sprang up on its ten long legs, clacked its beak, and lunged against the bars again and again.

Though in no danger, Martia shrank back before the killer's lust in the scarlet eyes. Lane could understand her reaction. It was a giant, at least two feet higher than the sentinels. Its back was on a level with Martia's; its beaks could have taken her head in between them.

Lane walked around the cage to get a good look at its posterior. Puzzled, he made another circuit without seeing anything of maleness about it except its wild fury, like that of a stallion locked in a barn during mating season. Except for its size and red eyes it looked like one of the guards.

He tried to communicate to Martia his puzzlement. By now, she seemed to anticipate his desires. She went through another series of pantomines, some of which were so energetic and comical that he had to smile.

First, she showed him two eggs on a nearby ledge. These were larger than the others and were speckled with red spots. Supposedly, they held male embryos.

Then she showed him what would happen if the adult male got loose. Making a face which was designed to be ferocious but only amused him, clicking her teeth and clawing her hands, she imitated the male running amok.

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He would kill everybody in sight. Everybody, the whole colony, queen, workers, guards, larvae, eggs, bite off their heads, mangle them, eat them all up, all, all. And out of the slaughterhouse it would charge into the tube and kill every legger it met, devour the jetfish, drag down the glowworms from the ceiling, rip them apart, eat them, eat the roots of the trees. Kill, kill, kill, eat, eat, eat!

That was all very well, signed Lane. But how did . . .?

Martia indicated that, once a day, the workers rolled, literally rolled the queen across the room to the cage. There they arranged her so that she presented her posterior some few inches from the bars and the enraged male. And the male, though he wanted to do nothing but get his beak into her flesh and tear her apart, was not master of himself. Nature took over; his will was betrayed by his nervous system.

Lane nodded to show he understood. In his mind was a picture of the legger that had been butchered. It had had one sac at the internal end of the tongue. Probably, the male had two, one to hold excretory matter, the other to hold seminal fluid.

Suddenly, Martia froze, her hands held out before her. She had laid the flashlight on the floor so she could act freely; the beam splashed on her paling skin.

"What is it?" said Lane, stepping toward her.

Martia retreated, holding out her hands before her. She looked horrified.

"I'm not going to harm you," he said. However, he stopped so she could see he didn't mean to get any closer to her.

What was bothering her? Nothing was stirring in the chamber itself besides the male, and he was behind bars.

Then she was pointing, first at him and then at the raging dekaped. Seeing this unmistakable signal of identification, he comprehended. She had perceived that he, like the thing in the cage, was male, and now she perceived structure and function in him.

What he didn't understand was why that should make her so frightened of him. Repulsed, yes. Her body, its seeming lack of sex, had given him a feeling of distaste bordering on nausea. It was only natural that she should react similarly to his body. However, she had seemed to have gotten over her first shock.

Why this unexpected change, this horror of him?

Behind him, the beak of the male clicked as it lunged against the bars. The click echoed in his mind. Of course, the monster's lust to kill!

Until she had met him, she had known only one male creature. That was the caged thing.

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Now, suddenly, she had equated him with the monster. A male was a killer.

Desperately, because he was afraid that she was about to run in a panic out of the room, he made signs that he was not like this monster; he shook his head no, no, no. He wasn't, he wasn't, he wasn't!

Martia, watching him intently, began to relax. Her skin regained its pinkish hue. Her eyes became their normal size. She even managed a strained smile.

To get her mind off the subject, he indicated that he would like to know why the queen and her consort had digestive systems, though the workers did not. For answer, she reached up into the downhanging mouth of the worm suspended from the ceiling. Her hand, withdrawn, was covered with secretion. After smelling her fist, she gave it to him to sniff also. He took it, ignoring her slight and probably involuntary flinching when she felt his touch.

The stuff had an odor like predigested food.

Martia then went to another worm. The two light organs of this one were not colored red, like the others, but had a greenish tint. Martia tickled its tongue with her finger and held out her cupped hands. Liquid trickled into the cup.

Lane smelled the stuff. No odor. When he drank the liquid, he discovered it to be a thick sugar water. Martia pantomimed that the glowworms acted as the digestive systems for the workers. They also stored food away for them. The workers derived part of their energy from the glucose excreted by the roots of the trees. The proteins and vegetable matter in their diet originated from the eggs and from the leaves of the umbrella plant. Strips of the tough membranous leaf were brought into the tubes by harvesting parties which ventured forth in the daytime.

The worms partially digested the eggs, dead leggers, and leaves and gave it back in the form of a soup. The soup, like the glucose, was swallowed by the workers and passed through the walls of their throats or into the long straight sac which connected the throat to the larger bloodvessels. The waste-products were excreted through the skin or emptied through the canal in the tongue.

Lane nodded and then walked out of the room. Seemingly relieved, Martia followed him. When they had crawled back into her quarters, she put the eggs in a refrigerator, poured a glass of wine for herself and for him, dipped her finger in both their wines, then touched the finger to her lips and to his. Lightly, he touched the tip with his tongue. This, he gathered, was one more ritual, perhaps a bedtime one,

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which affirmed that they were at one and at peace. It might be that it had an even deeper meaning, but if so, it escaped him.

Martia checked on the safety and comfort of the worm in the bowl. By now it had eaten all its food. She removed the worm, washed it, washed the bowl, half-filled the bowl with warm sugar water, placed it on a table by the bed, and put the creature back in. Then she lay down on the bed and closed her eyes. She did not cover herself and apparently did not expect him to want a cover.

Lane, tired though he was, could not rest. Like a tiger in its cage, he paced back and forth. He could not keep out of his mind the enigma of Martia nor the problem of getting back to base and eventually to the orbital ship. Earth must know what had happened.

After half an hour of this, Martia sat up. She looked steadily at him as if trying to discover the cause of his sleeplessness. Then, apparently sensing what was wrong, she rose and opened a cabinet hanging down from the wall. Inside were a number of books.

Lane said, "Ah, maybe I'll get some information now!" and he leafed through them all. Wild with eagerness, he chose three and piled them on the bed before sitting down to peruse them.

Naturally, he could not read the texts, but the three had many illustrations and photographs. The first volume was huge and seemed to be a sort of child's world history.

Lane looked at the first few pictures. Then he said, hoarsely, "My God, you're no more Martian than I am!"

Martia, startled by the wonder and urgency in his voice, came over to his bed and sat down by him. She watched while he turned the pages over until he reached a certain photo. Unexpectedly, she buried her face in her hands, and her body shook with deep sobs.

Lane was surprised. He wasn't sure why she was in such grief. The photo was an aerial view of a city on her home planet—or some planet on which her people lived. Perhaps it was the city in which she had—somehow—been born.

It wasn't long, however, before her sorrow began to stir up a response in him. Before he had any warning, he, too, was weeping.

Now he knew. It was loneliness, appalling loneliness, of the kind he had known when he had received no more word from the men in the tanks and he had believed himself the only human being on the face of this world.

After a while, the tears dried. He felt better and wished she would also be relieved. Apparently, she perceived his sympathy, for she smiled at him through her tears. And in an irresistible gust

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of rapport and affection she kissed his hand and then stuck two of his fingers in her mouth. This, he thought, must be her way of expressing friendship. Or perhaps it was gratitude for his presence. Or just for sheer joy. In any event, he thought, her society must have a high oral orientation.

"Poor Martia," he murmured. "It must be a terrible thing to have to turn to one as alien and weird as I must seem. Especially to one whom, a little while ago, you weren't sure wasn't going to eat you up."

He removed his fingers but, seeing her rejected look, he impulsively took hers in his mouth.

Strangely, this caused another burst of weeping. However, he quickly saw that it was happy weeping. After it was over, she laughed softly, as if pleased.

Lane took a towel and wiped her eyes and held it over her nose while she blew.

Now, strengthened, she was able to point out certain illustrations and by signs give him clues to what they meant.

This child's book started with an account of the dawn of life on her planet. The planet revolved around a star that, according to a simplified map, was in the center of the Galaxy.

Life had begun there much as it had on Earth. It had developed in its early stages on somewhat the same lines. But there were some rather disturbing pictures of primitive fish life. Lane wasn't sure of his interpretation, however, for these took much for granted.

They did show plainly that evolution there had picked out some different patterns, some different biological mechanisms, with which to advance, than it had on Earth.

Fascinated, he traced the passage from fish to amphibian to reptile to warmblooded but nonmammalian creature to an upright ground-dwelling apelike creature to beings like Martia.

Then the pictures depicted various aspects of this being's prehistoric life. Later, the invention of agriculture, working of metals, and so on.

The history of civilization was a series of pictures whose meaning he could seldom grasp. One thing was peculiar, unlike Earth's history. There was a relative absence of warfare. The Rameseses, Genghis Khans, Attilas, Caesars, Hitlers seemed to be missing.

But there was more, much more. Technology advanced much as it had on Earth, despite a lack of stimulation from war. Perhaps, he thought, it had started sooner than it had on his planet. He got the impression that Martia's people had evolved to their present state much earlier than *homo sapiens*.

Whether that was true or not,

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they now surpassed man. They could travel almost as fast as light, perhaps faster, and had mastered interstellar travel.

It was then that Martia pointed to a page which bore several photographs of Earth, obviously taken at various distances by a spaceship. Behind them an artist had drawn a shadowy figure, half-ape, half-dragon.

"Earth means this to you?" Lane said. *"Danger? Do not touch?"*

He looked for other photos of Earth. There were many pages dealing with other planets but only one of his home. That was enough.

"Why are you keeping us under distant surveillance?" said Lane. "You're so far ahead of us that, technologically speaking, we're Australian aborigines. What are you afraid of?"

Martia stood up, facing him. Suddenly, viciously, she snarled and clicked her teeth and hooked her hands into claws.

He felt a chill. This was the same pantomime she had used when demonstrating the mindless killcraziness of the caged male legger.

He bowed his head. "I can't really blame you. You're absolutely correct. If you contacted us, we'd steal your secrets. And then, look out! We'd infest all of space!"

He paused, bit his lip, and said, "Yet, we're showing some signs of progress. There's not been a war or a revolution for fifteen years; the UN has been settling problems that would once have resulted in a world war; Russia and the U.S. are still armed but are not nearly as close to conflict as they were when I was born. Perhaps . . . ?

"Do you know, I bet you've never seen an Earthman in the flesh before. Perhaps you've never seen a picture of one, or if you did, they were clothed. There're none of Earthpeople in these books. Maybe you knew we were male and female, but that didn't mean much to you until you saw me taking a shower, and the suddenly-revealed parallel between the male dekaped and myself horrified you. And you realized that this was the only thing in the world that you had for companionship. Almost as if I'd been shipwrecked on an island and found the other inhabitant was a tiger.

"But that doesn't explain what you are doing here, alone, living in these tubes among the indigenous Martians. Oh, how I wish I could talk!

"With thee conversing," he said, remembering those lines he had read the last night in the base.

She smiled at him, and he said, "Well, at least you're getting over your scare. I'm not such a bad fellow, after all, heh?"

She smiled again and went to a cabinet and from it took paper

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and pen. With them, she made one simple sketch after another. Watching her agile pen, he began to see what had happened.

Her people had had a base for a long time—a long long time—on the side of the Moon the Terrestrials could not see. But when rockets from Earth had first penetrated into space, her people had obliterated all evidences of the base. A new one had been set up on Mars.

Then, as it became apparent that a Terrestrial expedition would be sent to Mars, that base had been destroyed and another one set up on Ganymede.

However, four scientists had remained behind in these simple quarters to complete their studies of the dekapeds. Though Martia's people had studied these creatures for some time, they still had not found out how their bodies could adjust to the difference between tube pressure and the pressure which they were compelled to endure in the open air. The four believed that they were breathing hot on the neck of this secret and had gotten permission to stay until just before the Earthmen landed.

Martia actually was a native, in the sense that she had been born and raised here. She had been seven years here, she indicated, showing a sketch of Mars in its orbit around the sun and then holding up seven fingers.

That made her about fourteen Earth years old, Lane estimated. Perhaps these people reached maturity a little faster than his. That is, if she were mature. It was difficult to tell.

Horror twisted her face and widened her eyes as she showed him what had happened the night before they were to leave for Ganymede. The sleeping party had been attacked by an uncaged male legger.

It was rare that a male got loose. But he occasionally managed to escape. When he did, he destroyed the entire colony, all life in the tube wherever he went. He even ate the roots of the trees so that they died, and oxygen ceased to flow into that section of the tunnel.

There was only one way a forewarned colony could fight a rogue male—a dangerous method. That was to release their own male. They selected the few who would stay behind and sacrifice their lives to dissolve the bars with an acid secretion from their bodies while the others fled. The queen, unable to move, also died. But enough of her eggs were taken to produce another queen and another consort elsewhere.

Meanwhile, it was hoped that the males would kill each other or that the victor would be so crippled that he could be finished off by the soldiers.

Lane nodded. The only natural

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enemy of the dekapeds was an escaped male. Left unchecked, they would soon crowd the tubes and exhaust food and air. Unkind as it seemed, the escape of a male now and then was the only thing that saved the Martians from starvation and perhaps extinction.

However that might be, the rogue had been no blessing in disguise for Martia's people. Three had been killed in their sleep before the other two awoke. One had thrown herself at the beast and shouted to Martia to escape.

Almost insane with fear, Martia had nevertheless not allowed panic to send her running. Instead, she had dived for a cabinet to get a weapon.

A weapon, thought Lane. I'll have to find out about that.

Martia acted out what had happened. She had gotten the cabinet door open and reached in for the weapon when she felt the beak of the rogue fastening on her leg. Despite the shock, for the beak cut deeply into the blood vessels and muscles, she had managed to press the end of the weapon against the male's body. The weapon did its work, for the male dropped on the floor. Unfortunately, the beaks did not relax but held their terrible grip on her thigh, just above the knee.

Here Lane tried to interrupt so he could get a description of what the weapon looked like and of the principle of its operation. Martia, however, ignored his request. Seemingly, she did not understand his question, but he was sure that she did not care to reply. He was not entirely trusted, which was understandable. How could he blame her? She would be a fool to be at ease with such an unknown quantity as himself. That is, if he were unknown.

After all, though she did not know him well personally, she knew the kind of people from whom he came and what could be expected from them. It was surprising that she had not left him to die in the garden, and it was amazing that she had shared that communion of bread and wine with him.

Perhaps, he thought, it was because she was so lonely and any company was better than nothing. Or it might be that she acted on a higher ethical plane than most Earthmen and could not endure the idea of leaving a fellow sentient being to die, even if she thought him a bloodthirsty savage. Or she might have other plans for him, such as taking him prisoner.

Martia continued her story. She had fainted and some time later had awakened. The male was beginning to stir, so she had killed him this time.

One more item of information, thought Lane. The weapon is capable of inflicting degrees of damage. Then, though she kept pass-

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ing out, she had dragged herself to the medicine chest and treated herself. Within two days she was up and hobbling around, and the scars were beginning to fade.

They must be far ahead of us in everything, he thought. According to her, some of her muscles had been cut. Yet they grew together in a day.

Martia indicated that the repair of her body had required an enormous amount of food during the healing. Most of her time had been spent in eating and sleeping. Reconstruction, whether it took place at a normal or accelerated rate, still required the same amount of energy.

By then the bodies of the male and of her companions were stinking with decay. She had had to force herself to cut them up and dispose of them in the garbage burner. Tears swelled in her eyes as she recounted this, and she sobbed.

Lane wanted to ask her why she had not buried them, but he reconsidered. Though it might not be the custom among her kind to bury her dead, it was more probable that she wanted to destroy all evidence of their existence before Earthmen came to Mars.

Using signs, he asked her how the male had gotten into the room despite the gate across the tunnel. She indicated that the gate was ordinarily closed only when the dekapeds were awake or when her companions and she were sleeping. But it had been the turn of one of their number to collect eggs in the queen's chamber.

As she reconstructed it, the rogue had appeared at that time and killed the scientist there. Then, after ravening among the still sleeping colony, it had gone down the tube and there had seen the light shining from the opened tunnel. The rest of the story he knew.

Why, he pantomimed, why didn't the escaped male sleep when all his fellows did? The one in the cage evidently slept at the same time as his companions. And the queen's guards also slept in the belief they were safe from attack.

Not so, replied Martia. A male who had gotten out of a cage knew no law but fatigue. When he had exhausted himself in his eating and killing, he lay down to sleep. But it did not matter if it was the regular time for it or not. When he was rested, he raged through the tubes and did not stop until he was again too tired to move.

So, then, thought Lane, that explains the area of dead umbrella plants on top of the tube by the garden. Another colony moved into the devastated area, built the garden on the outside, and planted the young umbrellas.

He wondered why neither he

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nor the others of his group had seen the dekapeds outside during their six days on Mars. There must be at least one pressure chamber and outlet for each colony, and there should be at least fifteen colonies in the tubes between this point and that by his base. Perhaps the answer was that the leaf-croppers only ventured out occasionally.

Now that he remembered it, neither he nor anyone else had noticed any holes in the leaves. That meant that the trees must have been cropped some time ago and were now ready for another harvesting. If the expedition had only waited several days before sending out men in tracs, it might have seen the dekapeds and investigated. And the story would have been different.

There were other questions he had for her. What about the vessel that was to take them to Ganymede? Was there one hidden on the outside, or was one to be sent to pick them up? If one was to be sent, how would the Ganymedan base be contacted? By radio? Or by some inconceivable method?

The blue globes! he thought. Could they be means of transmitting messages?

He did not know or think further about them because his fatigue overwhelmed him, and he fell asleep. His last memory was that of Martia leaning over him and smiling at him.

When he awoke reluctantly, his muscles ached, and his mouth was as dry as the Martian desert. He rose in time to see Martia drop out of the tunnel, a bucket of eggs in her hand. Seeing this, he groaned. That meant she had gone into the nursery again, and that he had slept the clock around.

He stumbled up and into the shower cubicle. Coming out much refreshed, he found breakfast hot on the table. Martia conducted the communion rite, and then they ate. He missed his coffee. The hot soup was good but did not make a satisfactory substitute. There was a bowl of mixed cereal and fruit, both of which came out of a can. It must have had a high energy content, for it brought him wide awake.

Afterward, he did some setting-up exercises while she did the dishes. Though he kept his body busy, he was thinking of things unconnected with what he was doing. What was to be his next move? His duty demanded that he return to the base and report. What news he would send to the orbital ship! The story would flash from the ship back to Earth. The whole planet would be in an uproar.

There was one objection to his plan to take Martia back with him.

She would not want to go.

Halfway in a deep knee bend, he stopped. What a fool he was!

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He had been too tired and confused to see it. But if she had revealed that the base of her people was on Ganymede, she did not expect him to take the information back to his transmitter. It would be foolish on her part to tell him unless she were absolutely certain that he would be able to communicate to no one.

That must mean that a vessel was on its way and would arrive soon. And it would not only take her but him. If he was to be killed, he would be dead now.

Lane had not been chosen to be a member of the first Mars expedition because he lacked decision. Five minutes later, he had made up his mind. His duty was clear. Therefore, he would carry it out, even if it violated his personal feelings towards Martia and caused her injury.

First, he'd bind her. Then he would pack up their two pressure suits, the books, and any tools small enough to carry so they might later be examined on Earth. He would make her march ahead of him through the tube until they came to the point opposite his base. There they would don their suits and go out to the dome. And as soon as possible the two would rise on the rocket to the orbital ship. This step was the most hazardous, for it was extremely difficult for one man to pilot the rocket. Theoretically, though, it could be done. It had to be done.

Lane tightened his jaw and forced his muscles to quit quivering. The thought of violating Martia's hospitality upset him. Still, she had treated him so well for a purpose not altogether altruistic. For all he knew, she was plotting against him.

There was a rope in one of the cabinets, the same flexible rope with which she had pulled him from the mire. He opened the door of the cabinet and removed it. Martia stood in the middle of the room and watched him while she stroked the head of the blue-eyed worm coiled about her shoulders. He hoped she would stay there until he got close. Obviously, she carried no weapon on her nor indeed anything except the pet. Since she had removed her suit, she had worn nothing.

Seeing him approaching her, she spoke to him in an alarmed tone. It didn't take much sensitivity to know that she was asking him what he intended to do with the rope. He tried to smile reassuringly at her and failed. This was making him sick.

A moment later, he was violently sick. Martia had spoken loudly one word, and it was as if it had struck him in the pit of his stomach. Nausea gripped him, his mouth began salivating, and it was only by dropping the rope and running into the shower that he avoided making a mess on the floor.

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Ten minutes later, he felt a little better. But when he tried to walk to the bed, his legs threatened to give way. Martia had to support him.

Inwardly, he cursed. To have a sudden reaction to the strange food at such a crucial moment! Luck was not on his side.

That is, if it was chance. There had been something so strange and forceful about the manner in which she pronounced that final word. Was it possible that she had set up in him—hypnotically or otherwise—a reflex to that word? It would, under the conditions, be a weapon more powerful than a gun.

He wasn't sure, but it did seem strange that his body had accepted the alien food until that moment. Hypnotism did not really seem to be the answer. How could it be so easily used on him since he did not know more than twenty words of her language?

Language? Words? They weren't necessary. If she had given him a hypnotic drug in his food, and then had awakened him during his sleep, she could have dramatized how he was to react if she wanted him to do so. She could have given him the key word, then have allowed him to go sleep again.

He knew enough hypnotism to know that that was possible. Whether his suspicions were true or not, it was a fact that he had been laid flat on his back. However, the day was not wasted. He learned twenty more words, and she drew many more sketches for him. He found out that when he had jumped into the mire of the garden he had literally fallen into the soup. The substance in which the young umbrella trees had been planted was a zoogloea, a glutinous mass of one-celled vegetables and somewhat larger anaerobic animal life that fed on the vegeatbles. The heat from the jam-packed, water-swollen bodies kept the garden soil warm and prevented the tender plants from freezing even during the forty degrees below zero Fahrenheit of the midsummer nights.

After the trees were transplanted into the roof of the tube to replace the dead adults, the zoogloea would be taken piecemeal back into the tube and dumped into the channel. Here the jetfish would strain out part and eat part as they pumped water from the polar end of the tube to the equatorial end.

Towards the end of the day, he tried some of the zoogloea soup and managed to keep it down. A little later, he ate some cereal.

Martia insisted on spooning the food for him. There was something so feminine and tender about her solicitude that he could not protest.

"Martia," he said, "I may be wrong. There can be good will

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and rapport between our two kinds. Look at us. Why, if you were a real woman, I'd be in love with you.

"Of course, you may have provoked quite different feelings in in the first place. You may have made me ill. But if you did, it was a matter of expediency, not malice. And now you are taking care of me, your enemy. Love thy enemy. Not because you have been told you should, but because you do."

She, of course, did not understand him. However, she replied in her own tongue, and it seemed to him that her voice had the same sense of sympático.

As he fell asleep, he was thinking that perhaps Martia and he would be the two ambassadors to bring their people together in peace. After all both of them were highly civilized, essentially pacifistic, and devoutly religious. There was such a thing as the brotherhood, not only of man, but of all sentient beings throughout the cosmos, and . . .

Pressure on his bladder woke him up. He opened his eyes. The ceiling and walls expanded and contracted. His wristwatch was distorted. Only by extreme effort could he focus his eyes enough to straighten the arms on his watch. The piece, designed to measure the slightly longer Martian day, indicated midnight.

Groggily, he rose. He felt sure that he must have been drugged and that he would still be sleeping if the bladder pain hadn't seen so sharp. If only he could take something to counteract the drug, he could carry out his plans now. But first he had to get to the toilet.

To do so, he had to pass close to Martia's bed. She did not move but lay on her back, her arms flung out and hanging over the sides of the bed, her mouth open wide.

He looked away, for it seemed indecent to watch when she was in such a position.

But something caught his eye —a movement, a flash of light like a gleaming jewel in her mouth.

He bent over her, looked, and recoiled in horror.

A head rose from between her teeth.

He raised his hand to snatch at the thing but froze in the posture as he recognized the tiny pouting round mouth and little blue eyes. It was the worm.

At first, he thought Martia was dead. The thing was not coiled in her mouth. Its body disappeared into her throat.

Then he saw her chest was rising easily and that she seemed to be in no difficulty.

Forcing himself to come close to the worm, though his stomach muscles writhed and his neck muscles quivered, he put his hand

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close to its lips. Warm air touched his fingers, and he heard a faint whistling.

Martia was breathing through it!

Hoarsely, he said, "God!", and he shook her shoulder. He did not want to touch the worm because he was afraid that it might do something to injure her. In that moment of shock he had forgotten that he had an advantage over her, which he should use.

Martia's lids opened; her large gray-blue eyes stared blankly.

"Take it easy," he said.

She shuddered. Her lids closed; her neck arched back, and her face contorted. He could not tell if the grimace was caused by pain or something else.

"What is this—this monster?" he said. "Symbiote? Parasite?"

He thought of vampires, of worms creeping into one's sleeping body and there sucking blood.

Suddenly, she sat up and held out her arms to him. He seized her hands, saying, "What is it?"

Martia pulled him towards her, at the same time lifting her face to his.

Out of her open mouth shot the worm, its head pointed towards his face, its little lips formed into an O.

It was reflex, the reflex of fear that made Lane drop her hands and spring back. He had not wanted to do that, but he could not help himself.

Abruptly, Martia became wide awake. The worm flopped its full length from her mouth and fell into a heap between her legs. There it thrashed for a moment before coiling itself like a snake, its head resting on Martia's thigh, its eyes turned upwards to Lane.

There was no doubt about it. Martia looked disappointed, frustrated.

Lane's knees, already weak, gave way. However, he managed to continue on into the toilet and there rid himself of both pressure and his supper. When he came out, he walked as far as Martia's bed, where he had to sit down. His heart was thudding against his ribs, and he was panting hard.

He sat behind her, for he did not want to be where the worm could touch him.

Martia made motions that he should go back to his bed and they would all sleep. Evidently, he thought, she found nothing alarming in the incident.

But he knew he could not rest until he had some kind of explanation. He handed her paper and pen from the bedside table and then gestured fiercely. Martia shrugged and began sketching while Lane watched over her shoulder. By the time she had used up five sheets of paper, she had communicated her message.

His eyes were wide, and he was even paler.

So—Martia *was* a female. Fe-

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male at least in the sense that she carried eggs—and, at times, young—within her.

And there was the so-called worm. So called? What could he call it? It could not be included under one category. It was many things in one. It was a larva. It was a phallus. It was also her offspring.

But not of her genes. It was not descended from her.

She had given birth to it, yet she was not its mother. She was neither one of its mothers.

The dizziness and confusion he felt was not caused altogether by his sickness. Things were coming too fast. He was thinking furiously, trying to get this new information clear, but his thoughts kept going back and forth, getting nowhere.

"There's no reason to get upset," he told himself. "After all, the splitting of animals into two sexes is only one of the ways of reproduction tried on Earth. On Martia's planet, Nature—God—has fashioned another method for the higher animals. And only He knows how many other designs for reproduction He has fashioned on how many other worlds."

Nevertheless, he was upset.

This worm, no, this larva, this embryo outside its egg and its secondary mother . . . well, call it, once and for all, larva, because it did metamorphose later.

This particular larva was doomed to stay in its present form until it died of old age.

Unless Martia found another adult of the Eeltau.

And unless she and this other adult felt affection for each other.

Then, according to the sketch she'd drawn, Martia and her friend, or lover, would lie down or sit together. They would, as lovers do on Earth, speak to each other in endearing, flattering, and exciting terms. They would caress and kiss much as Terrestrial man and woman would, though on Earth it was not considered complimentary to call one's lover Big Mouth.

Then, unlike the Terran custom, a third would enter the union to form a highly desired and indeed indispensable and eternal triangle.

The larva, blindly, brainlessly obeying its instincts, aroused by mutual fondling by the two, would descend tail first into the throat of one of the two Eeltau. Inside the body of the lover a fleshy valve would open to admit the slim body of the larva. Its open tip would touch the ovary of the host. The larva, like an electric eel, would then release a tiny current. The hostess would go into an ecstasy, its nerves stimulated electrochemically. The ovary would release an egg no larger than a pencil dot. It would disappear into the open tip of the larva's tail, there to begin a jour-

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ney up a canal towards the center of its body, urged on by the contraction of muscle and whipping of cilia.

Then the larva slid out of the first hostess' mouth and went tail first into the other, there to repeat the process. Sometimes the larva garnered eggs, sometimes not, depending upon whether the ovary had a fully developed one to release.

When the process was successful, the two eggs moved towards each other but did not quite meet.

Not yet.

There must be other eggs collected in the dark incubator of the larva, collected by pairs, though not necessarily from the same couple of donors.

These would number anywhere from twenty to forty pairs.

Then, one day, the mysterious chemistry of the cells would tell the larva's body that it had gathered enough eggs.

A hormone was released; the metamorphosis begun. The larva swelled enormously, and the mother, seeing this, placed it tenderly in a warm place and fed it plenty of predigested food and sugar water.

Before the eyes of its mother, the larva then grew shorter and wider. Its tail contacted; its cartilaginous vertebrae, widely separated in its larval stage, shifted closer to each other and hardened. A skeleton formed, ribs, shoulders. Legs and arms budded and grew and took humanoid shape. Six months passed, and there lay in its crib something resembling a baby of *homo sapiens*.

From then until its fourteenth year, the Eeltau grew and developed much as its Terran counterpart.

Adulthood, however, initiated more strange changes. Hormone released hormone until the first pair of gametes, dormant these fourteen years, moved together.

The two fused, the chromatin of one uniting with the chromatin of the other. Out of the two—a single creature, wormlike, four inches long, released into the stomach of its hostess.

Then, nausea. Vomiting. And so, comparatively painlessly, the bringing forth of a genetically new being.

It was this worm that would be both foetus and phallus and would give ecstasy and draw into its own body the eggs of loving adults and would metamorphose and become infant, child, and adult.

And so on and so on.

He rose and shakily walked to his own bed. There he sat down, his head bowed, while he muttered to himself.

"Let's see now. Martia gave birth to, brought forth, or up, this larva. But the larva actually doesn't have any of Martia's genes. Martia was just the hostess for it.

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"However, if Martia has a lover, she will, by means of this worm, pass on her heritable qualities. This worm will become an adult and bring forth, or up, Martia's child."

He raised his hands in despair.

"How do the Eeltau reckon ancestry? How keep track of their relatives? Or do they care? Wouldn't it be easier to consider your foster mother, your hostess, your real mother? As, in the sense of having borne you, she is?

"And what kind of a sexual code do these people have? It can't, I would think, be much like ours. Nor is there any reason why it should be.

"But who is responsible for raising the larva and child? Its pseudo-mother? Or does the lover share in the duties? And what about property and inheritance laws? And, and . . ."

Helplessly, he looked at Martia.

Fondly stroking the head of the larva, she returned his stare.

Lane shook his head.

"I was wrong. Eeltau and Terran couldn't meet on a friendly basis. My people would react to yours as to disgusting vermin. Their deepest prejudices would be aroused, their strongest taboos would be violated. They could not learn to live with you or consider you even faintly human.

"And as far as that goes, could you live with us? Wasn't the sight of me naked a shock? Is that reaction a part of why you don't make contact with us?"

Martia put the larva down and stood up and walked over to him and kissed the tips of his fingers. Lane, though he had to fight against visibly flinching, took her fingers and kissed them. Softly, he said to her, "Yet . . . individuals could learn to respect each other, to have affection for each other. And masses are made of individuals."

He lay back on the bed. The grogginess, pushed away for a while by excitement, was coming back on him. He couldn't fight off sleep much longer.

"Fine noble talk," he murmured. "But it means nothing. The Eeltau don't think they should deal with us. And we are, unknowingly, pushing out towards them. What will happen when we are ready to make the interstellar jump? War? Or will they be afraid to let us advance even to that point and will destroy us before then? After all, one cobalt bomb . . ."

He looked again at Martia, at the not-quite-human yet beautiful face, the smooth skin of the chest, abdomen, and loins, innocent of nipple, navel or labia. From far off she had come, from a possibly terrifying place across terrifying distances. About her, however, there was little that was terrifying and much that was warm, generous, companionable, attractive.

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As if they had waited for some key to turn, and the key had been turned, the lines he had read before falling asleep that last night in the base came again to him.

It is the voice of my beloved that knocketh, saying,
Open to me, my sister, my love, my dove, my undefiled . . .

We have a little sister,
And she hath no breasts:
What shall we do for our sister
In the day when she shall be spoken for?

With thee conversing, I forget all time,
All seasons, and their change, all please alike.

"With thee conversing," he said aloud. He turned over so his back was to her, and he pounded his fist against the bed.

"Oh dear God, why couldn't it be so?"

A long time he lay there, his face pressed into the mattress. Something had happened; the once overpowering fatigue was gone; his body had gotten strength from some reservior. Realizing this, he sat up and beckoned to Martia, smiling at the same time.

She rose slowly and started to walk to him, but he signalled that she should bring the larva with her. At first, she looked puzzled. Then, her expression cleared, to be replaced by understanding. Smiling delightedly, she walked to him, and though he knew it must be a trick of his imagination, it seemed to him that she swayed her hips as a woman would.

She halted in front of him and then stooped to kiss him full on the lips. Her eyes were closed.

He hesitated for a fraction of a second. She—no, it, he told himself—looked so trusting, so loving, so womanly, that he could not do it.

"For Earth!" he said fiercely and brought the edge of his palm against the side of her neck.

She crumpled forward against him, her face sliding into his chest. Lane caught her under her armpits and lay her face down on the bed. The larva, which had fallen from her hand onto the floor, was writhing about as if hurt. Lane picked it up by its tail and, in a frenzy that owed its violence to the fear he might not be able to do it, snapped it like a whip.

There was a crack as the head smashed into the floor, and blood spurted from its eyes and mouth. Lane placed his heel on the head and stepped down until there was a flat mess beneath his foot.

Then, quickly, before she could come to her senses and speak any words that would render him sick and weak, he ran to a cabinet. Snatching a narrow towel out of

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it, he ran back to her and gagged her. After that, he tied her hands behind her back with the rope.

"Now, you bitch!" he panted. "We'll see who comes out ahead! You would do that with me, would you! You deserve this; your monster deserves to die!"

Furiously, he began packing. In fifteen minutes he had the suits, helmets, tanks, and food rolled into two bundles. He searched for the weapon she had talked about and found something that might conceivably be it. It had a butt that fitted to his hand, a dial that might be a rheostat for controlling degrees of intensity of whatever it shot, and a bulb at the end. The bulb, he hoped expelled the stunning and killing energy. Of course, he might be wrong. It could be used for an entirely different purpose.

Martia had regained consciousness. She sat on the edge of the bed, her shoulders hunched, her head drooping, tears running down her cheeks and into the towel around her mouth. Her wide eyes were focused on the smashed worm by her feet.

Roughly, Lane seized her shoulder and pulled her upright. She gazed wildly at him, and he gave her a little shove. At the same time, he felt sick within him, knowing that he had killed the larva when he did not have to do so and that he was handling her so violently because he was afraid not of her, but of himself. If he had been so disgusted because she had fallen into the trap he set for her, he was so because he, too, beneath his disgust, had wanted to commit that act of love. Commit, he thought, was the right word. It contained criminal implications.

Martia whirled around, almost losing her balance because of her tied hands. Her face worked, and sounds burst from the gag.

"Shut up!" he howled, pushing her again. She went sprawling and only saved herself from falling on her face by dropping on her knees. Once more, he pulled her to her feet, noting as he did so that her knees were skinned. The sight of the blood, instead of softening him, enraged him even more.

"Behave yourself, or you'll get worse!" he snarled.

She gave him one more questioning look, threw back her head, and made a strange strangling sound. Immediately, her face became a bluish tinge. A second later, she fell heavily on the floor.

Alarmed, he turned her over. She was choking to death.

He tore off her gag and reached into her mouth and grabbed her tongue. It slipped away and he seized it again, only to have it slide away as if it were a live animal that defied him.

Then he had pulled it out of her throat, where she

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had swallowed it in an effort to kill herself.

Lane waited. When he was sure she was going to recover, he put the gag around her mouth. Just as he was about to tie the knot at the back of her neck, he stopped. What use would it be to continue this? If allowed to speak, she would say the word that would throw him into retching. If gagged, she would swallow her tongue again.

He could save her only so many times. Eventually, she would succeed in strangling herself.

The one way to solve his problem was the one way he could not take. If her tongue were cut off at the root, she could neither speak nor kill herself. Some men might do it; he could not.

The only other way to keep her silent was to kill her.

"I can't do it in cold blood," he said aloud. "So, if you want to die, Martia, then you must do it by committing suicide. That, I can't help. Up you go. I'll get your pack, and we'll leave."

Martia turned blue and sagged to the floor.

"I'll not help you this time!" he shouted, but he found himself frantically trying to undo the knot.

At the same time, he told himself what a fool he was. Of course! The solution was to use her own gun on her. Turn the rheostat to a stunning degree of intensity and knock her out, whenever she started to regain consciousness. Such a course would mean he'd have to carry her and her equipment, too, for the thirty mile walk down the tube to an exit near his base. But he could do it. He'd rig up some sort of travois. He'd do it! Nothing could stop him. And Earth . . .

At that moment, hearing an unfamiliar noise, he looked up. There were two Eeltau in pressure suits standing there, and another crawling out of the tunnel. Each had a bulb-tipped handgun in her hand.

Desperately, Lane snatched at the weapon he carried in his belt. With his left hand he twisted the rheostat on the side of the barrel, hoping that this would turn it on full force. Then he raised the bulb towards the group. . . .

He woke flat on his back, clad in his suit, except for the helmet, and strapped to a stretcher. His body was helpless, but he could turn his head. He did so, and saw many Eeltau dismantling the room. The one who had stunned him with her gun before he could fire was standing by him.

She spoke in English that held only a trace of foreign accent. "Settle down, Mr. Lane. You're in for a long ride. You'll be more comfortably situated once we're in our ship."

He opened his mouth to ask

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her how she knew his name but closed it when he realized she must have read the entries in the log in the base. And it was to be expected that some Eeltau would be trained in Earth languages. For over a century their sentinel spaceships had been tuning into radio and TV.

It was then that Martia spoke to the captain. Her face was wild and was reddened with weeping and marks where she had fallen.

The interpreter said to Lane, "*Mahrseeya* asks you to tell her why you killed her . . . baby. She cannot understand why you thought you had to do so. Why, why?"

"I cannot answer," said Lane. His head felt very light, almost as if it were a balloon expanding. And the room began slowly to turn around.

"I will tell her why," answered the interpreter. "I will tell her that it is the nature of the beast."

"That is not so!" cried Lane. "I am no vicious beast. I did what I did because I had to! I could not accept her love and still remain a man! Not the kind of man . . ."

"*Mahrseeya,*" said the interpreter, "will pray that you be forgiven the murder of her child and that you will someday, under our teaching, be unable to do such a thing. She herself, though she is stricken with grief for her dead baby, forgives you. She hopes the time will come when you will regard her as a—sister. She thinks there is some good in you."

Lane clenched his teeth together and bit the end of his tongue until it bled while they put his helmet on. He did not dare to try to talk, for that would have meant he would scream and scream. He felt as if something had been planted in him and had broken its shell and was growing into something like a worm. It was eating him, and what would happen before it devoured all of him he did not know.

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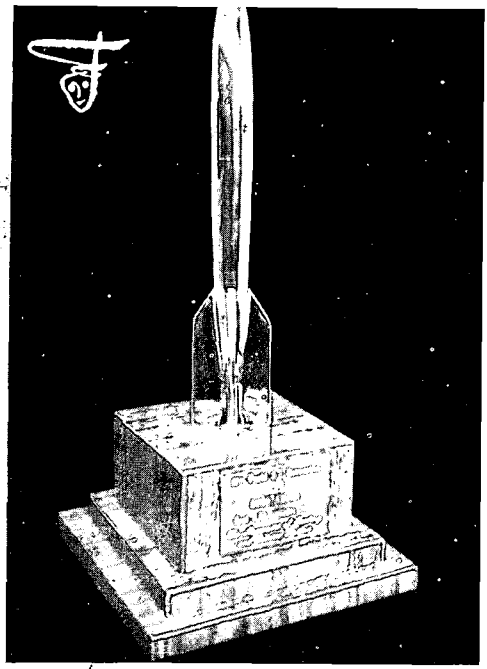

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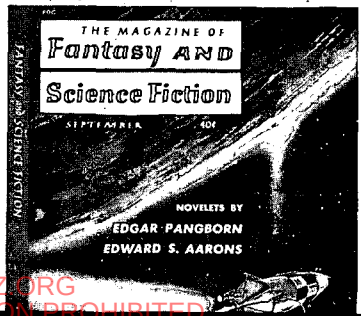

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